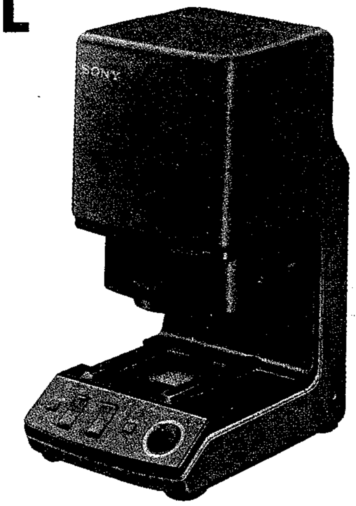
PHV-A7

SERVICE MANUAL

US Model
Canadian Model
E Model



SPECIFICATIONS

• System

Video signal	NTSC
Image device	Precision CCD image sensor

• Input and output jacks

S video output	4-pin mini DIN Luminance: 1Vp-p, 75 ohms unbalanced, sync negative Chrominance: 0.286Vp-p, 75 ohms unbalanced
Video output	Phono jack, 1Vp-p, 75 ohms unbalanced, sync negative
RFU DC OUT	Special mini jack, 5V DC
Audio output	Phono jack, −7.5dBs, (at output impedance 47 kilohms), impedance less than 2.2 kilohms
MIC IN	Minijack, −60dBS, low impedance with 2.5−3V DC output, impedance 6.8 kilohms

• General

Power requirements	AC 120V 60Hz
Power consumption	13 W
Operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	−20°C to 60°C (−4°F to 140°F)
Range of object field	48.5 × 36.6 − 8.6 × 6.5 mm (1 15/16 × 1 1/2 − 11/32 × 9/32 inches)
Dimensions	126 × 256 × 190 (W/H/D) mm (5 × 10 1/8 × 7 1/2 inches)
Weight	2.3kg (5 lb 1 oz)
Supplied accessories	Film carrier (for strip film 1, for mounted film 1) AV connecting cable (1) Dust cover (1)
Optional accessories	Video printer CVP-G500 Microphone F-VX50 S video connecting cable YC-15V RFU adaptor RFU-89UCKA LCD color monitor XV-M30 Film carrier HVT-NA7/SA7

Design and specifications are subject to change without notice.

MICROFILM

PHOTO VIDEO CAMERA

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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SECTION 1
GENERAL

This section is extracted from instruction manual.

Overview

The photo video camera PHV-A7 is a film-to-video converter which enables you to view your photo films on your TV. Having the negative/positive selector, you can easily display both negative and positive films. It also accepts both strip and mounted film. Furthermore, you can use this unit in many other ways such as magnifying a small object on the TV screen.

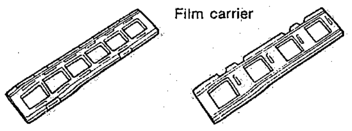
Main features of the PHV-A7

- 1/2 inch precision CCD image sensor (410,000 picture elements) for sharp, clear image detail
- High resolution picture (400 TV lines and above)
- S video output for high quality picture
- Negative/positive selector for using both negative and positive films
- Instant automatic focus function for easy focusing
- Zooming function (x6) for making the picture appear closer or farther away
- White balance function for adjusting the white color of your picture
- Manual iris control for adjusting the brightness to your taste
- Color balance control for adding color effect
- Angle rotating control for changing the angle of the picture
- Microphone input for adding sound effects
- Trimming function for cutting unnecessary parts of the picture

Supplied accessories

Before you start operation, check to see that everything is contained in the package.

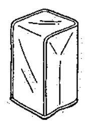
Film carrier



For strip 35mm film

For mounted 35mm film

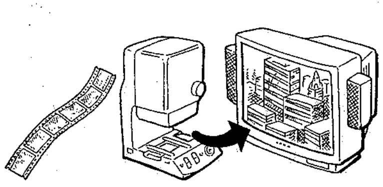
AV connecting cable



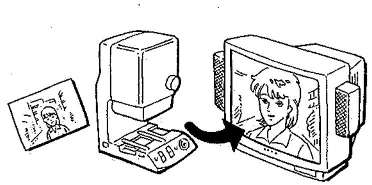
Dust cover

With This Unit, You Can

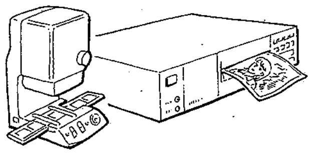
Display negative film on the TV screen



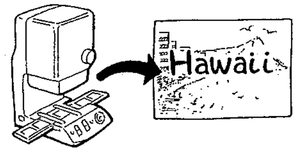
Magnify a small object or photograph on the TV screen



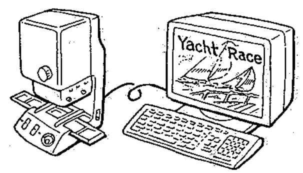
Connect to VCR for editing or video printer for printing



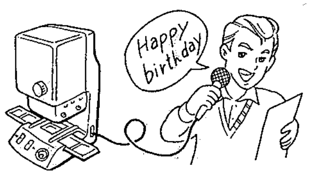
Use as an instant titler for editing



Connect to personal computer for scanning the picture



Add sound effects using a microphone



Precautions

On safety

- Operate the unit only on 120V AC, 60Hz.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Unplug the unit from the wall outlet if it will not be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.

On Installation

Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On connection

- Before connecting, be sure to turn off all equipment.
- Insert plugs securely, as loose connections may cause hum and noise.
- To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- To avoid interference, turn off equipment not in use.
- If noise occurs in the picture or sound, move the pieces of equipment farther away from each other.
- For details on connections, refer to the instruction manual covering the corresponding equipment.

On operation

When the unit will not be used, turn the power off to conserve energy and to extend the useful life of your unit.

On cleaning the cabinet

Clean the cabinet and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

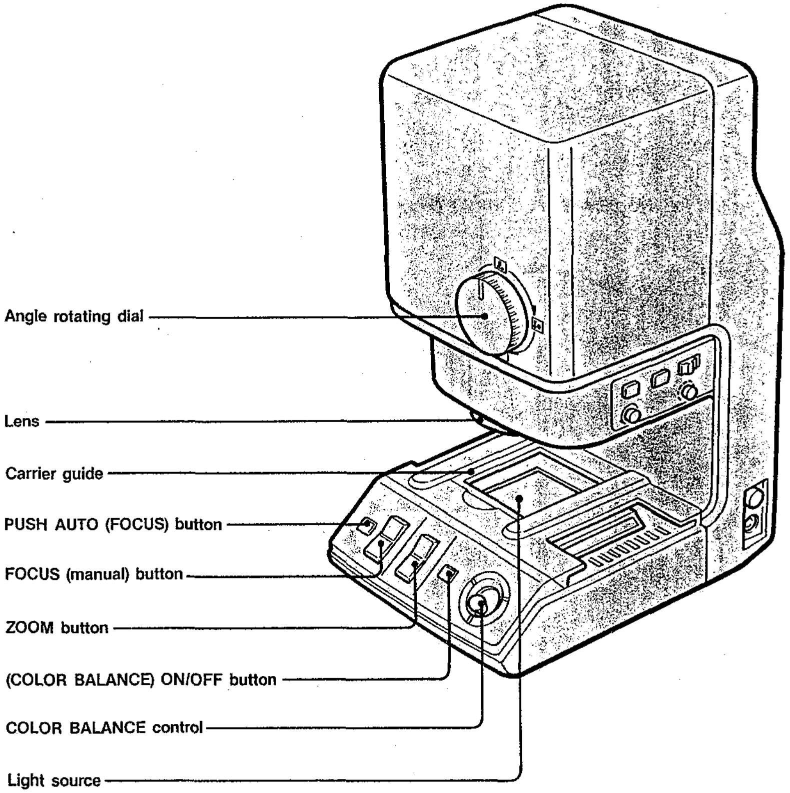
Clean the lens and film with a blower. If dust is on the lens, it will be displayed on the screen.

On repacking

Do not throw away the carton and the packing material. It makes an ideal container to transport the unit in.

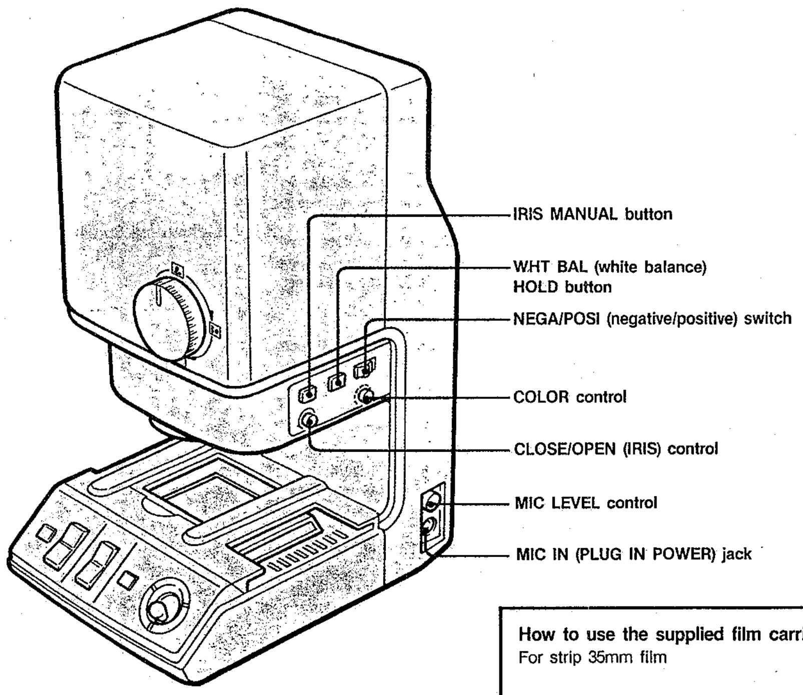
Parts Identification

Front

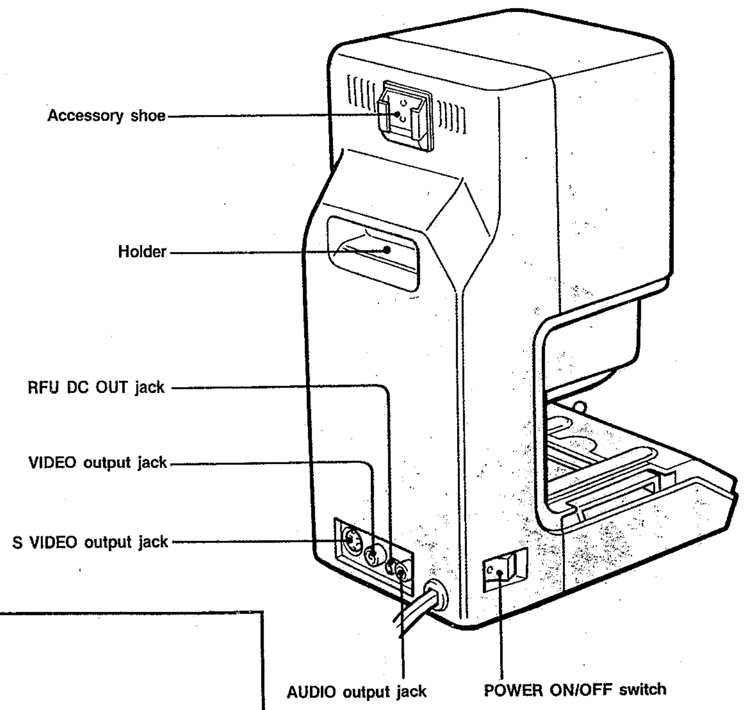


Parts Identification

Right Side

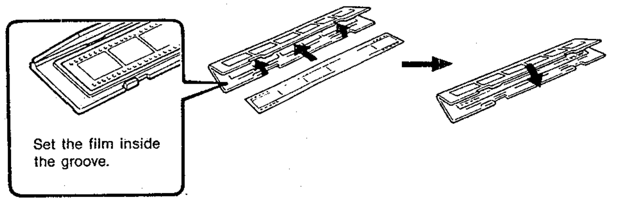

IRIS MANUAL button
WHT BAL (white balance) HOLD button
NEGA/POSI (negative/positive) switch
COLOR control
CLOSE/OPEN (IRIS) control
MIC LEVEL control
MIC IN (PLUG IN POWER) jack

Rear

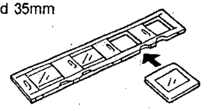

Accessory shoe
Holder
RFU DC OUT jack
VIDEO output jack
S VIDEO output jack
AUDIO output jack
POWER ON/OFF switch

How to use the supplied film carrier

For strip 35mm film


Set the film inside the groove.

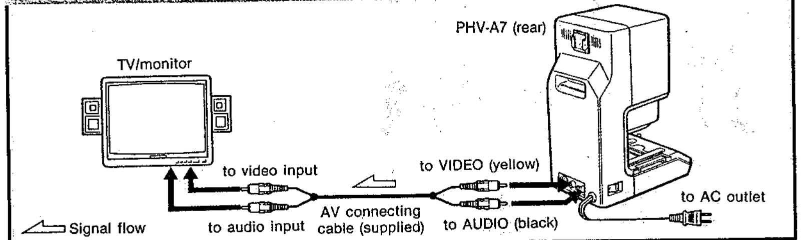
For mounted 35mm film



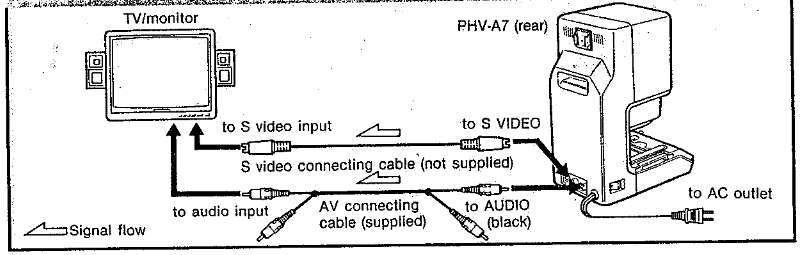
To Connect Other Equipment

Before connection, be sure to turn off all equipment. Refer to the manual of the corresponding equipment for connection.

To Connect to a TV/monitor with Audio/video Input

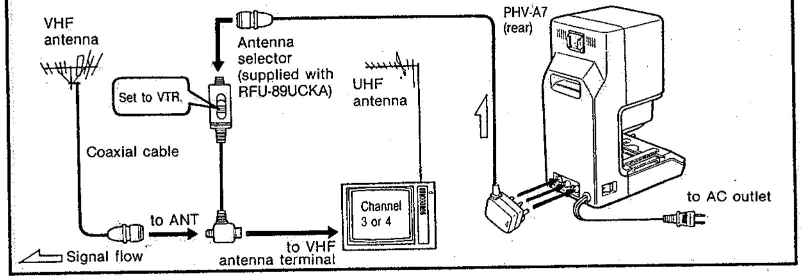

PHV-A7 (rear)
TV/monitor
to video input
to VIDEO (yellow)
to AC outlet
AV connecting cable (supplied)
Signal flow
to audio input
to AUDIO (black)

To Connect to a TV/monitor with an S Video Input


TV/monitor
PHV-A7 (rear)
to S video input
to S VIDEO
S video connecting cable (not supplied)
to audio input
AV connecting cable (supplied)
to AUDIO (black)
to AC outlet
Signal flow

To Connect to a TV without an Audio/video Input

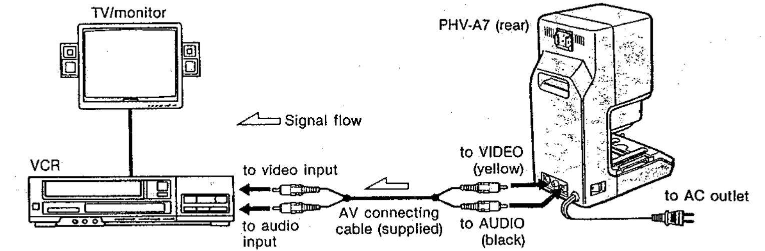
You need to use the RFU adaptor RFU-89UCKA (not supplied.)


VHF antenna
Antenna selector (supplied with RFU-89UCKA)
Set to VTR.
UHF antenna
PHV-A7 (rear)
Coaxial cable
to ANT
Channel 3 or 4
to VHF antenna terminal
to AC outlet
Signal flow

If the TV/monitor is stereo

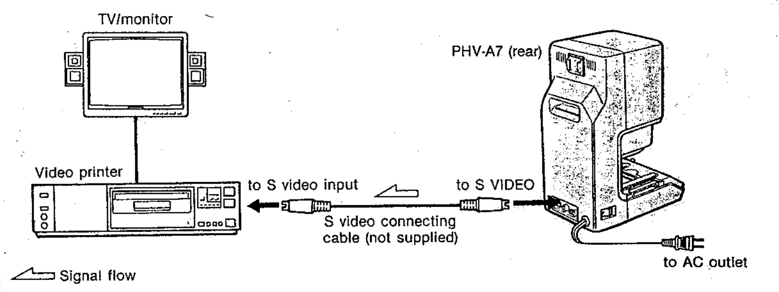
Connect the audio plug (black) of the supplied AV connecting cable to the audio left (white) jack of the TV/monitor. You can also use the AV connecting cable VMC-910/920MS (not supplied.)

To Connect to a VCR

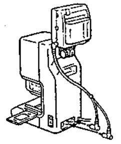

TV/monitor
PHV-A7 (rear)
Signal flow
VCR
to video input
to VIDEO (yellow)
to AC outlet
AV connecting cable (supplied)
to audio input
to AUDIO (black)

For a VCR with an S video input, use the S video connecting cable YC-15V (not supplied) for a better quality picture.

To Connect to a Video Printer


TV/monitor
PHV-A7 (rear)
Video printer
to S video input
to S VIDEO
S video connecting cable (not supplied)
to AC outlet
Signal flow

To Connect an LCD Color Monitor



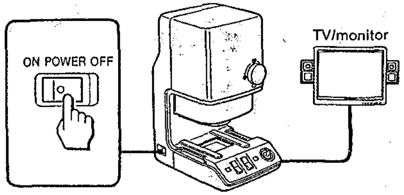
Attach the LCD color monitor (not supplied) via the accessory shoe, then connect the monitor and PHV-A7 with the supplied AV connecting cable.

Basic Operation

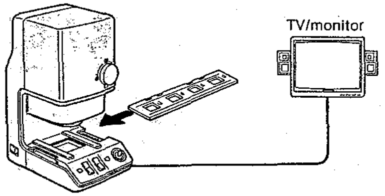
This section explains the procedure for displaying film on the TV screen. This unit accepts film under 35 mm.

1 **Turn on the power of this unit and the TV.**
The picture appears on the screen after about 4 seconds.

Note
When you turn on the power, the light source may not light up if the fluorescent tube protection circuit functions.
In such case, turn off the power, then turn on again after about 5 seconds.

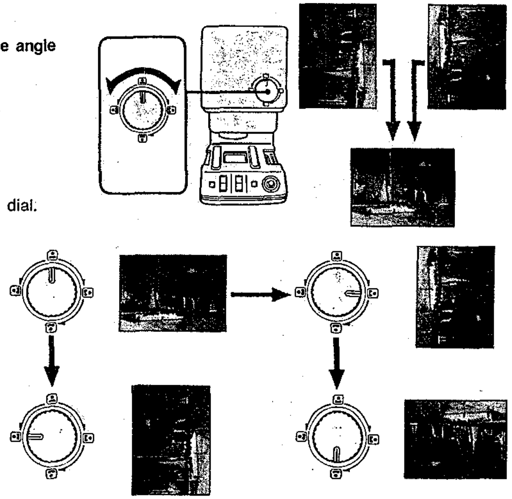


2 **Attach the film carrier (for strip film or mounted film) to the carrier guide of this unit.**

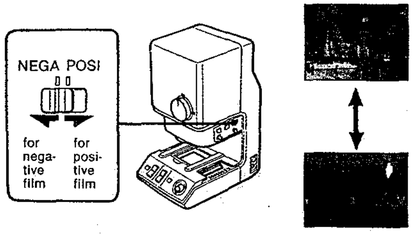


3 **Adjust the angle of the picture.You can adjust the angle within 270°.**

Rotate the angle rotating dial.

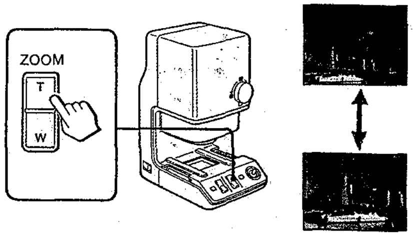


4 **Set the NEGA/POSI (negative/positive) switch.**

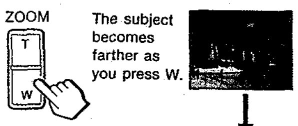


5 **Press ZOOM button (T or W).**

Note
While pressing the ZOOM button (also a few seconds after), automatic focus functions.

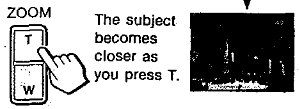


To make the subject appear farther away
Press W (wide).



The subject becomes farther as you press W.

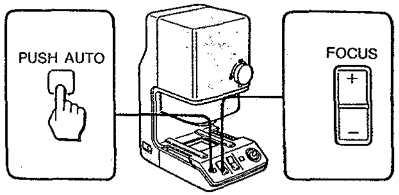
To make the subject appear closer
Press T (telephoto).



The subject becomes closer as you press T.

6 **Adjust the focus.**
Keep the PUSH AUTO button pressed until the picture is in focus.

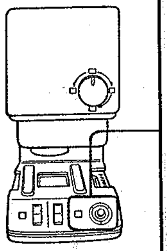
To focus manually
The automatic focus may not function depending on the kind of the film you are using. In such case, adjust the focus with the FOCUS +/– button.



Basic Operation

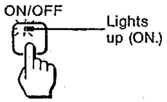
If the color or brightness is not normal
Turn off the power, then after a few seconds, turn it on again.

To trim the unnecessary part of the picture
Move the film carrier to adjust the position of the picture, then press the ZOOM button to adjust the size.

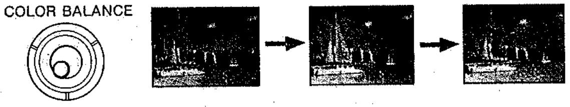


How to Change the Color Balance

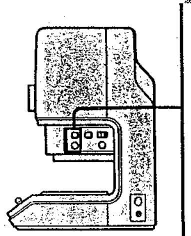
1 **Press the ON/OFF button.**



2 **Adjust with the COLOR BALANCE control.**

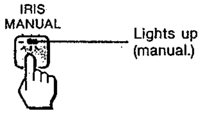


Advanced Operation

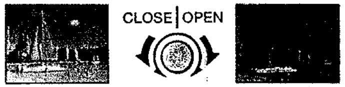


How to Adjust the Brightness

1 **Press the IRIS PUSH/MANUAL button.**

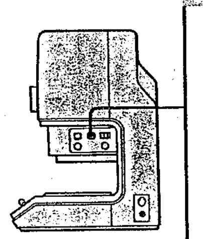


2 **Adjust with the CLOSE/OPEN control.**



(For negative film. The effect is opposite for positive film)

- You can adjust for inadequate brightness to a certain extent, even if it was due to under exposure when the picture was taken.
- Normally, the iris is adjusted automatically. However, if light hits the optical source part directly, the automatic iris may not function. In such case, adjust it manually.



How to Hold the White Balance Level

When you zoom the picture, the white balance level may change. To avoid such change, use this function.

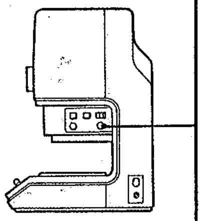
Press the WHT BAL HOLD button.

WHT BAL
HOLD
Lights up (hold mode.)

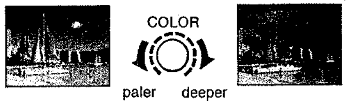
The white balance level does not change when you press the ZOOM button to change the size of the picture.

Advanced Operation

How to Adjust the Color

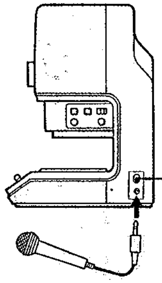


Adjust with the COLOR control.


COLOR
paler
deeper

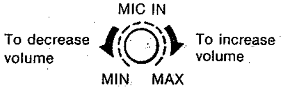
To make the color deeper, turn to the right.
To make the color paler, turn to the left.
If you turn the control to the left end, the color turns to black and white.

To Insert Sound Using a Microphone



1 **Connect the microphone to MIC IN (PLUG IN POWER) jack.**

2 **Adjust the volume with the MIC LEVEL control.**

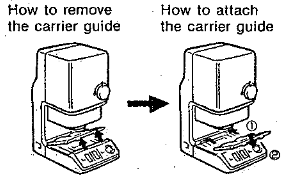

MIC IN
To decrease volume
To increase volume
MIN
MAX

When this unit is connected to a TV/monitor and audio system, and the microphone is near the speaker, howling (noise) may occur. In such case, lower the volume of the TV and audio system.

To Display a Small Object or Photograph

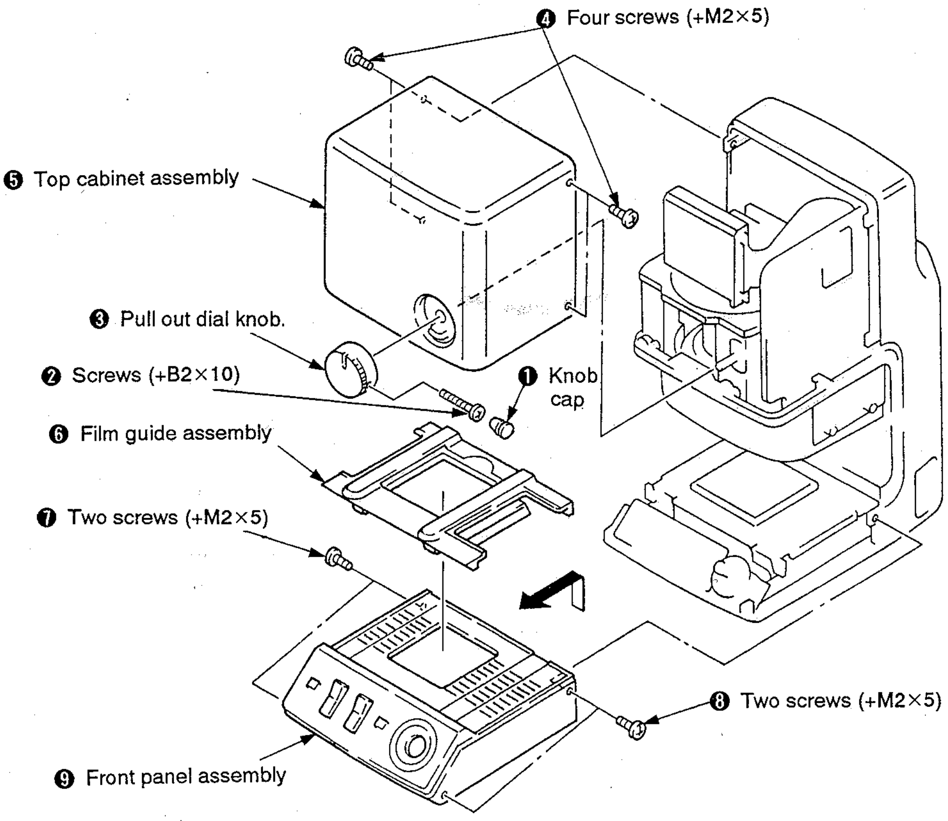
To display small object or photograph, remove the carrier guide from this unit, then place the object or photograph directly. If placed on the carrier guide, the picture may not be in focus.

Note
Without the carrier guide, light hits the optical source part directly and may interfere with automatic iris function.
In such case, adjust iris manually.

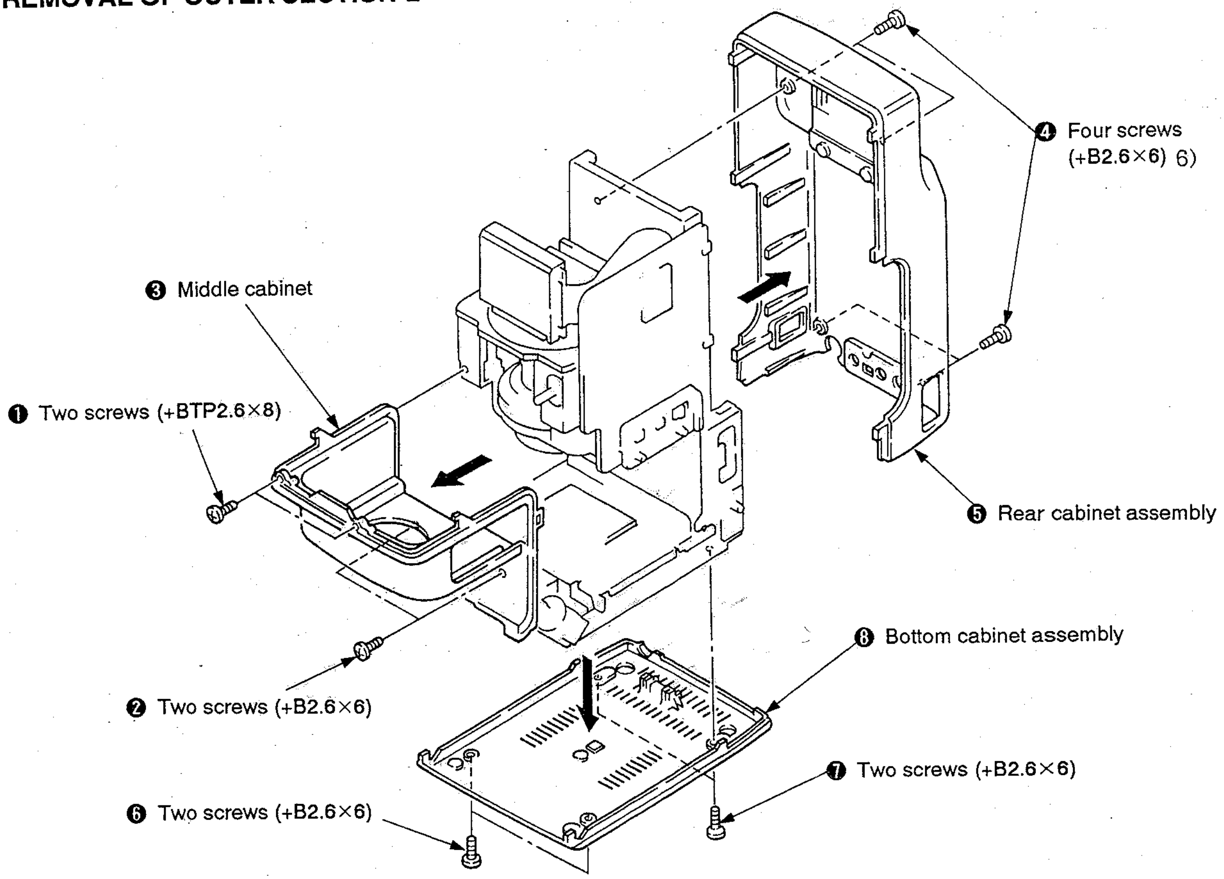

How to remove the carrier guide
How to attach the carrier guide
①
②

SECTION 2
DISASSEMBLY

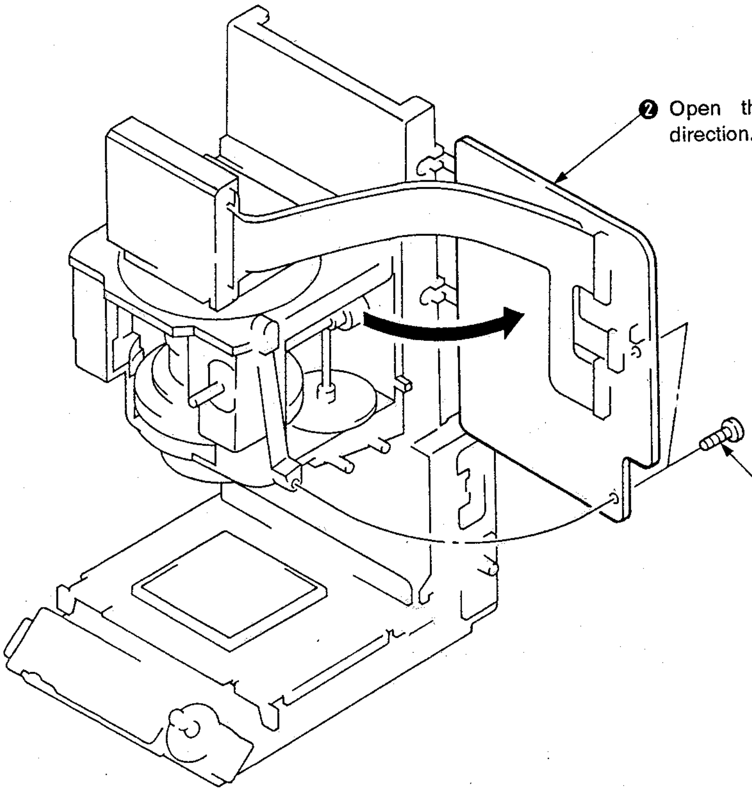
2-1. REMOVAL OF OUTER SECTION-1


❹ Four screws (+M2×5)
❺ Top cabinet assembly
❸ Pull out dial knob.
❷ Screws (+B2×10)
❶ Knob cap
❻ Film guide assembly
❼ Two screws (+M2×5)
❽ Two screws (+M2×5)
❾ Front panel assembly

2-2. REMOVAL OF OUTER SECTION-2


❹ Four screws (+B2.6×6) 6)
❸ Middle cabinet
❶ Two screws (+BTP2.6×8)
❺ Rear cabinet assembly
❽ Bottom cabinet assembly
❷ Two screws (+B2.6×6)
❼ Two screws (+B2.6×6)
❻ Two screws (+B2.6×6)

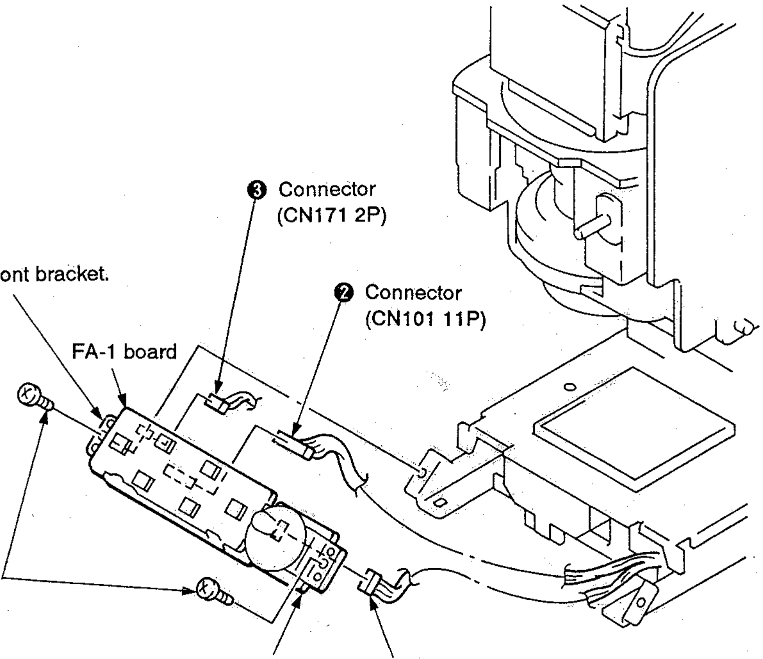
2-3. OPENING OF VC-85 BOARD



② Open the VC-85 board in the arrow direction.

① Two screws (+P2.6×8)

2-4. REMOVAL OF FRONT BRACKET (FA-1 AND JS-22 BOARDS)



③ Connector (CN171 2P)

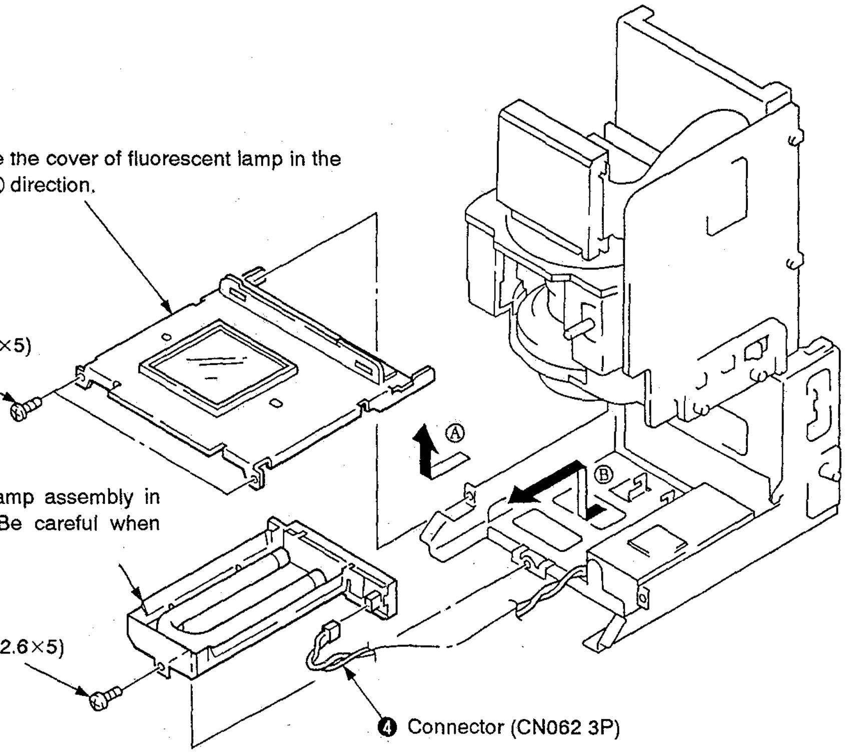
⑤ Remove the front bracket.

② Connector (CN101 11P)

① Two screws (+P2.6×5)

④ Connector (CN102 4P)

2-5. REMOVAL OF FLUORESCENT LAMP ASSEMBLY



❷ Remove the cover of fluorescent lamp in the arrow Ⓐ direction.

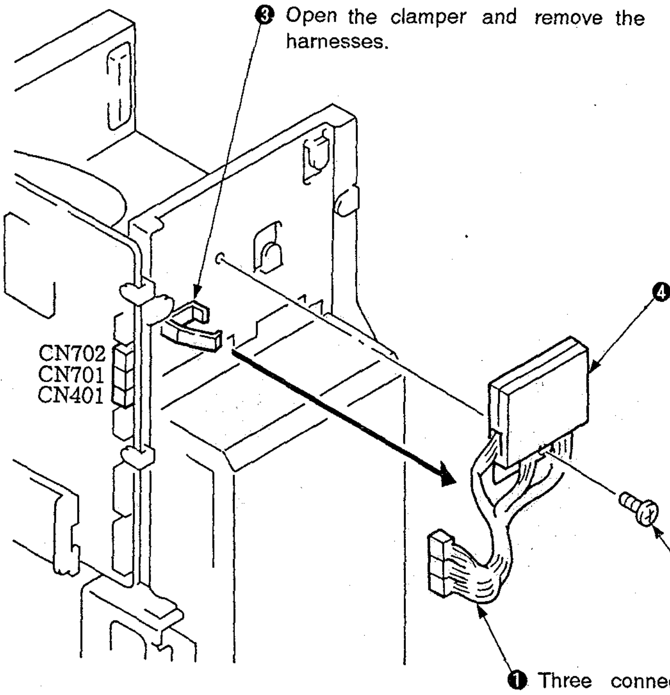
❶ Two screws (+P2.6×5)

❺ Remove the fluorescent lamp assembly in the arrow Ⓑ direction. (Be careful when removing.)

❸ Screw (+P2.6×5)

❹ Connector (CN062 3P)

2-6. REMOVAL OF DC-DC CONVERTER UNIT



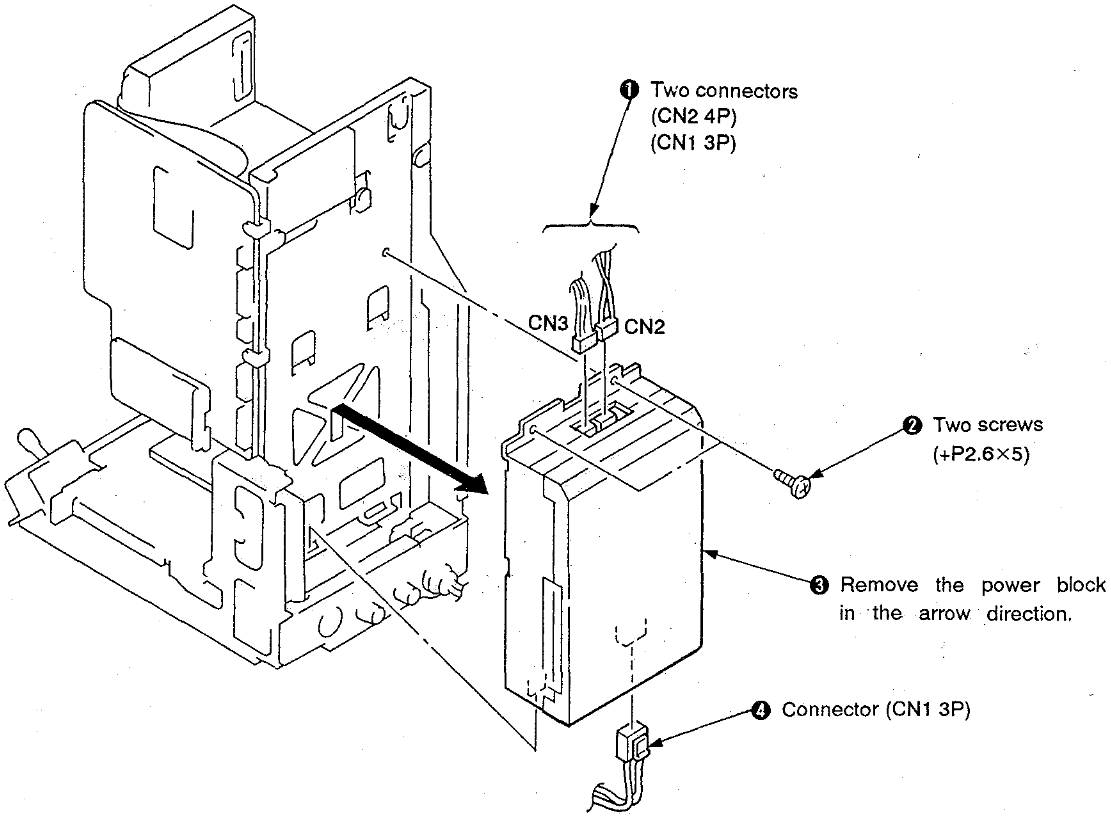
❸ Open the clamper and remove the harnesses.

❹ DC-DC converter unit

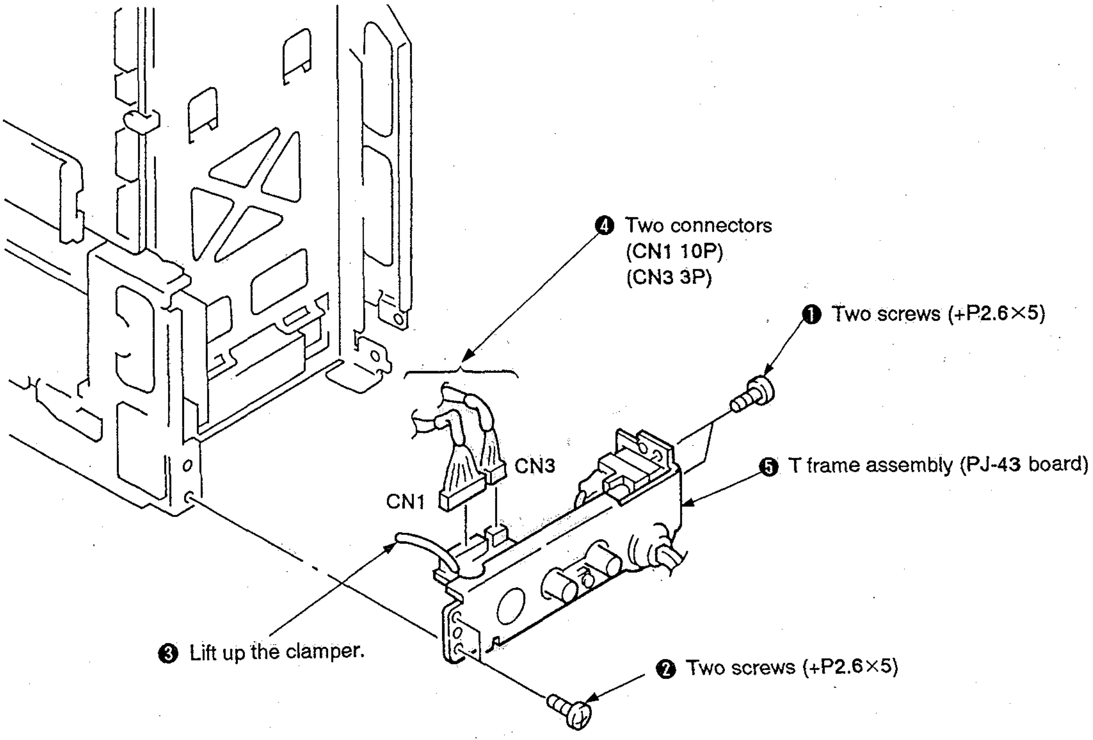
❷ Screw (+P2×3)

❶ Three connectors (CN401, CN701 and CN702)
(VC-85 board)

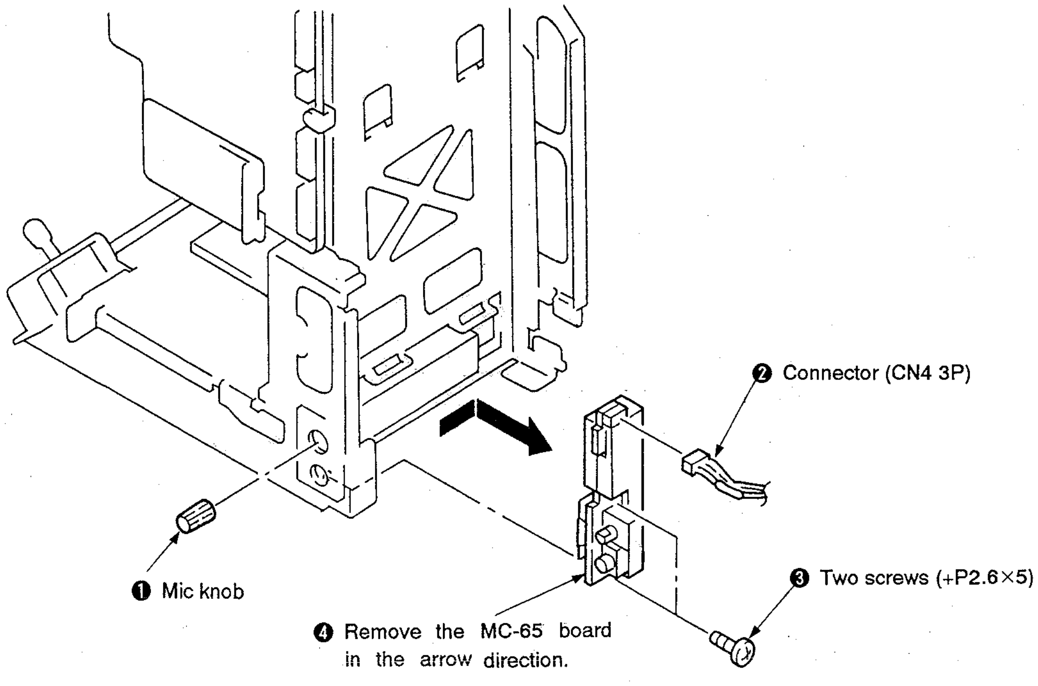
2-7. REMOVAL OF POWER BLOCK


❶ Two connectors
(CN2 4P)
(CN1 3P)
CN3
CN2
❷ Two screws
(+P2.6×5)
❸ Remove the power block in the arrow direction.
❹ Connector (CN1 3P)

2-8. REMOVAL OF T FRAME ASSEMBLY (PJ-43 BOARD)

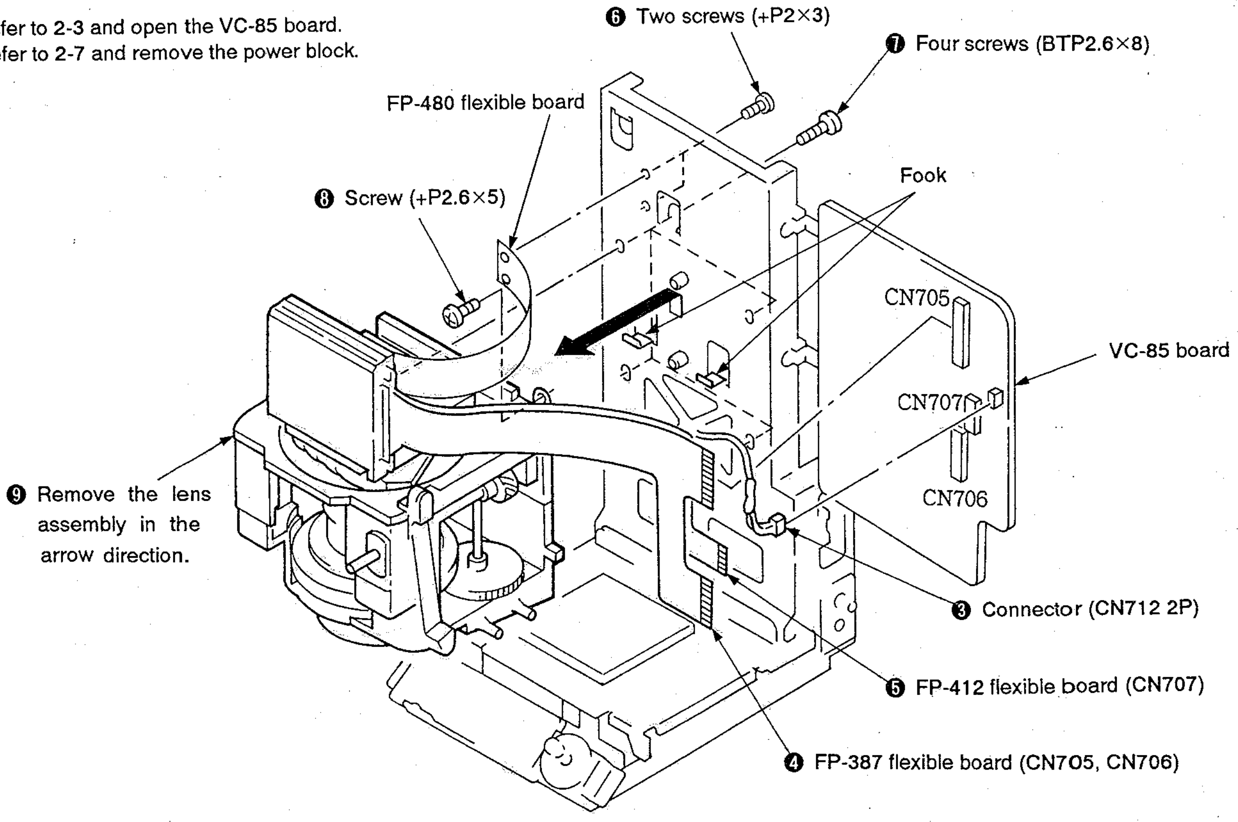

❹ Two connectors
(CN1 10P)
(CN3 3P)
❶ Two screws (+P2.6×5)
CN3
CN1
❺ T frame assembly (PJ-43 board)
❸ Lift up the clamper.
❷ Two screws (+P2.6×5)

2-9. REMOVAL OF MC-65 BOARD

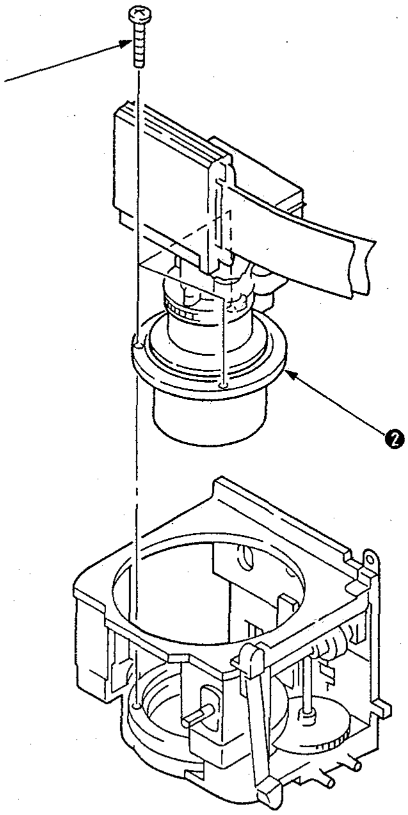

❷ Connector (CN4 3P)
❶ Mic knob
❸ Two screws (+P2.6×5)
❹ Remove the MC-65 board in the arrow direction.

2-10. REMOVAL OF LENS ASSEMBLY

❶ Refer to 2-3 and open the VC-85 board.
❷ Refer to 2-7 and remove the power block.


❻ Two screws (+P2×3)
❼ Four screws (BTP2.6×8)
FP-480 flexible board
Fook
❽ Screw (+P2.6×5)
CN705
VC-85 board
CN707
CN706
❾ Remove the lens assembly in the arrow direction.
❸ Connector (CN712 2P)
❺ FP-412 flexible board (CN707)
❹ FP-387 flexible board (CN705, CN706)

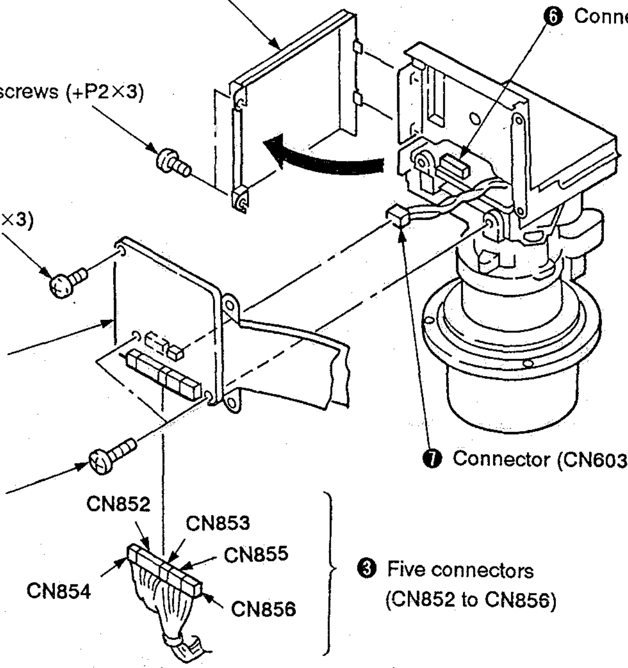
2-11. REMOVAL OF LENS ASSEMBLY



❶ Three screws (+PTP2×12)
(Turn the lens assembly and remove the screws at the potimum position with a long screw driver.)

❷ Hold up the lens assembly.

2-12. REMOVAL OF GE-10 BOARD



❷ Remove the shield case (C) in the arrow direction.

❻ Connector (CN602 18P)

❶ Two screws (+P2×3)

❹ Screw (+P2×3)

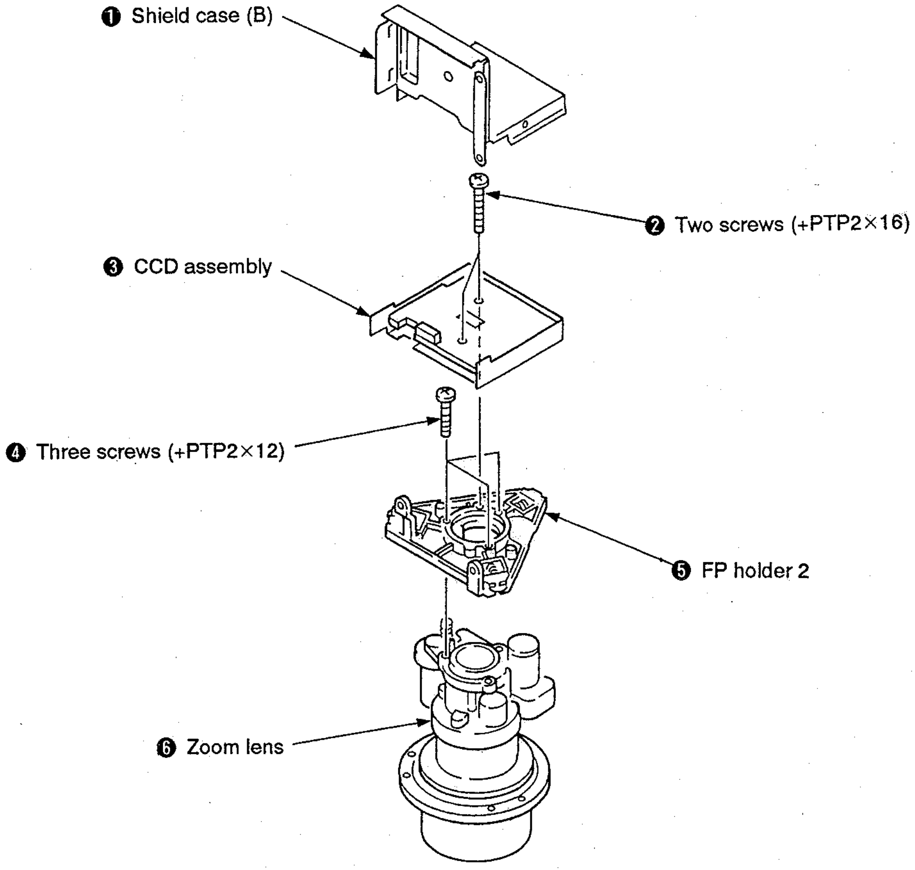
❽ GE-10 board

❼ Connector (CN603 2P)

❺ Two screws (+BTP2×5)

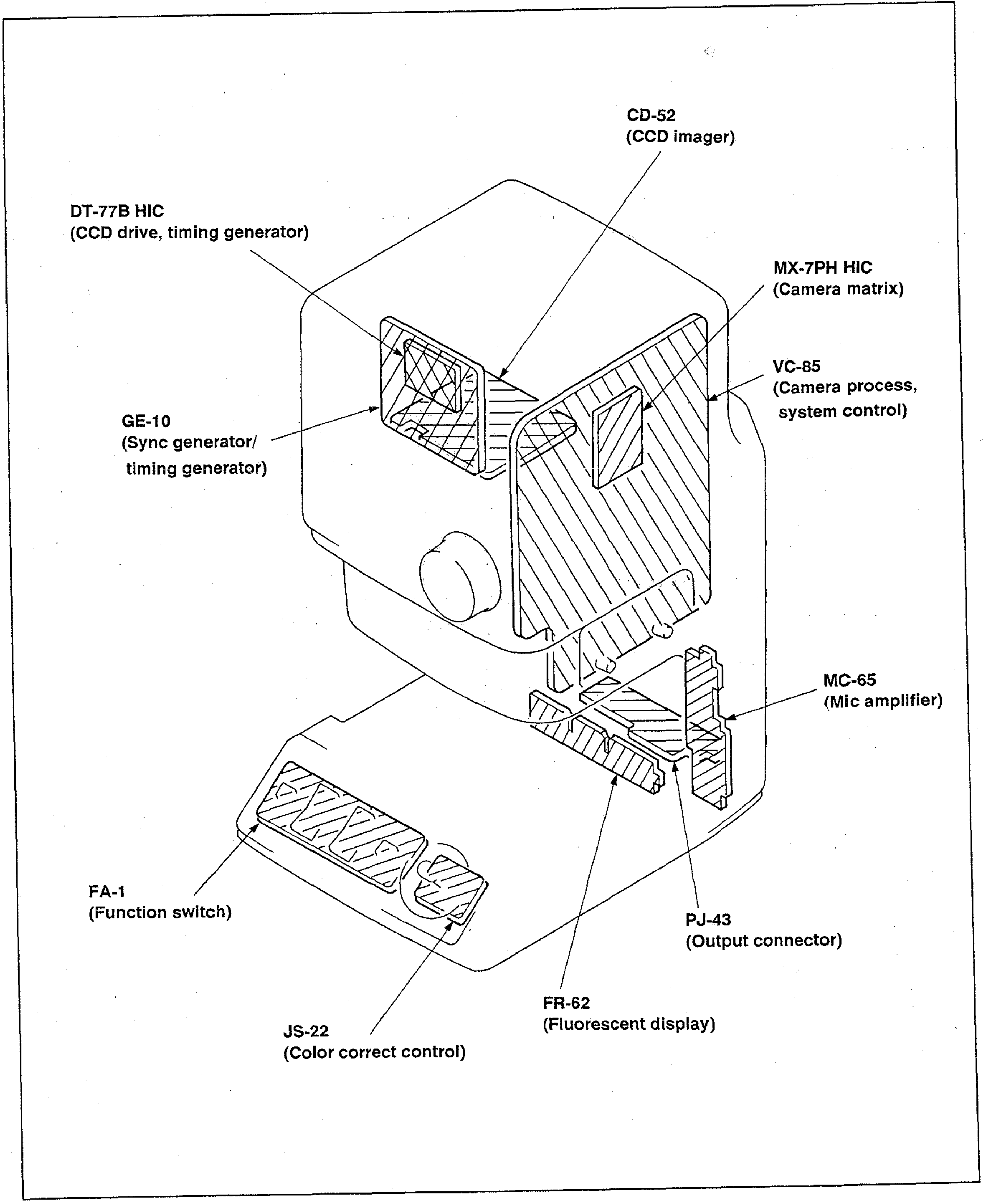
❸ Five connectors (CN852 to CN856)

2-13. REMOVAL OF ZOOM LENS

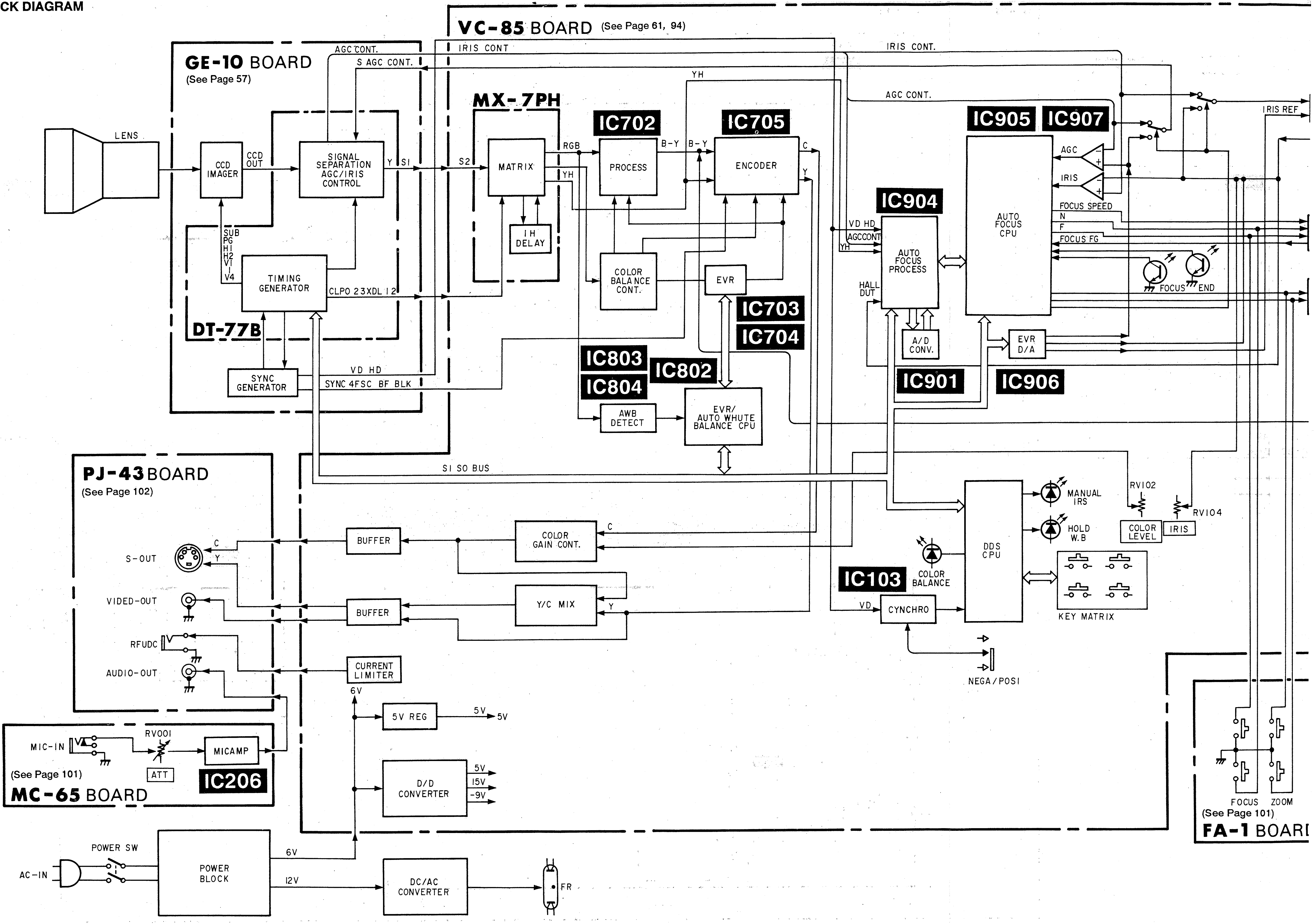

❶ Shield case (B)
❷ Two screws (+PTP2×16)
❸ CCD assembly
❹ Three screws (+PTP2×12)
❺ FP holder 2
❻ Zoom lens

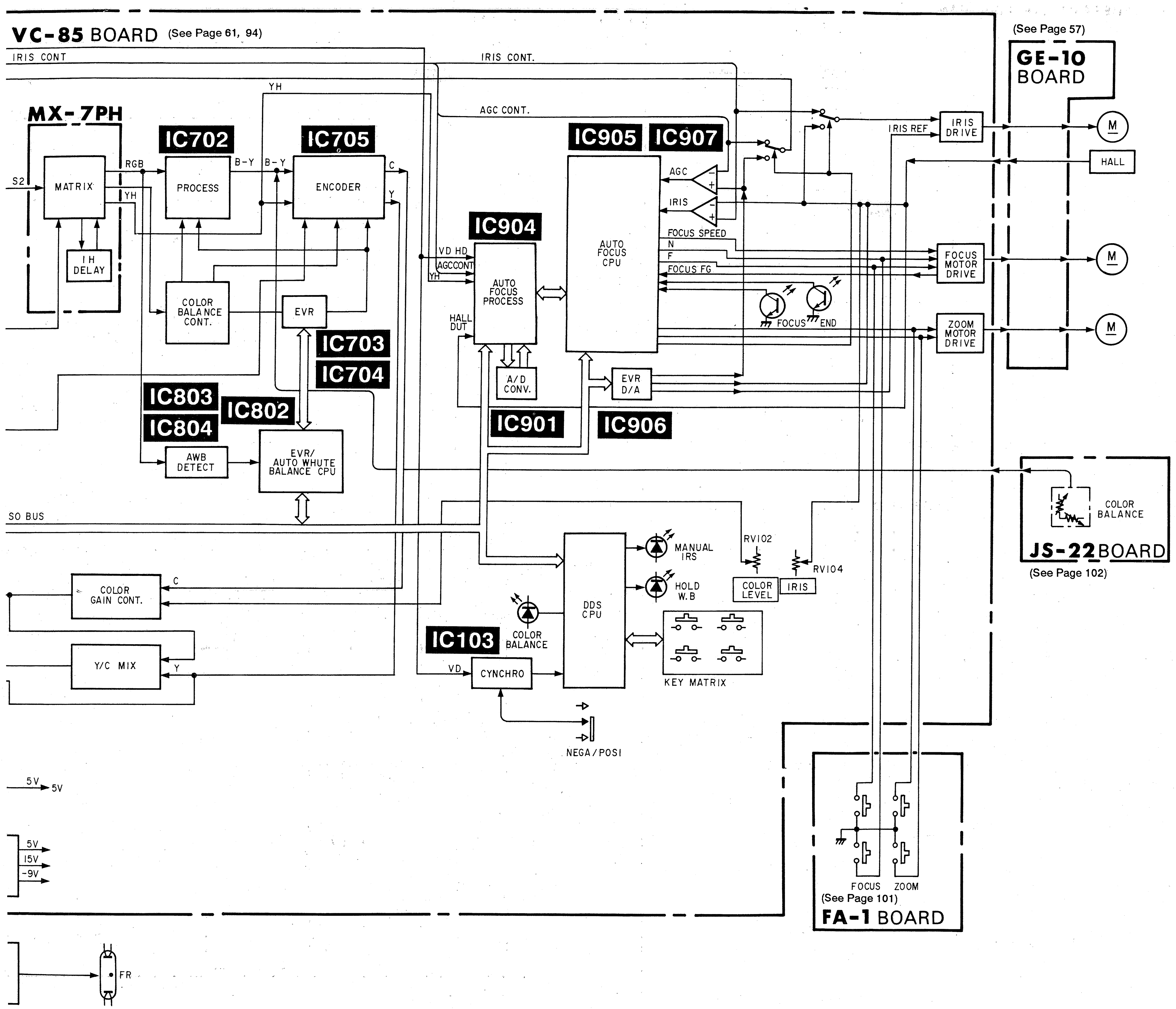
SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARD LOCATION

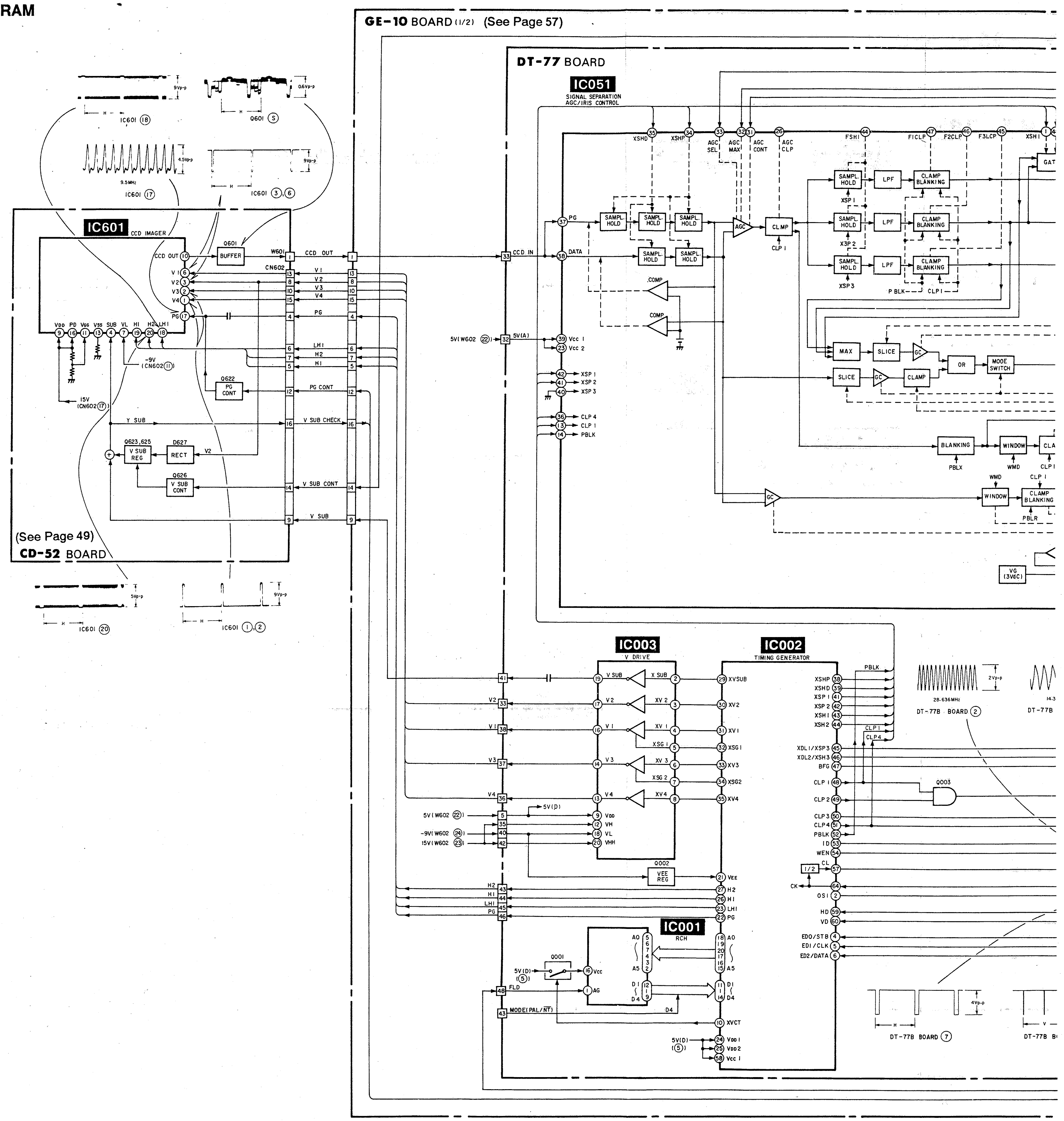

CD-52
(CCD imager)
DT-77B HIC
(CCD drive, timing generator)
MX-7PH HIC
(Camera matrix)
VC-85
(Camera process,
system control)
GE-10
(Sync generator/
timing generator)
MC-65
(Mic amplifier)
FA-1
(Function switch)
PJ-43
(Output connector)
FR-62
(Fluorescent display)
JS-22
(Color correct control)

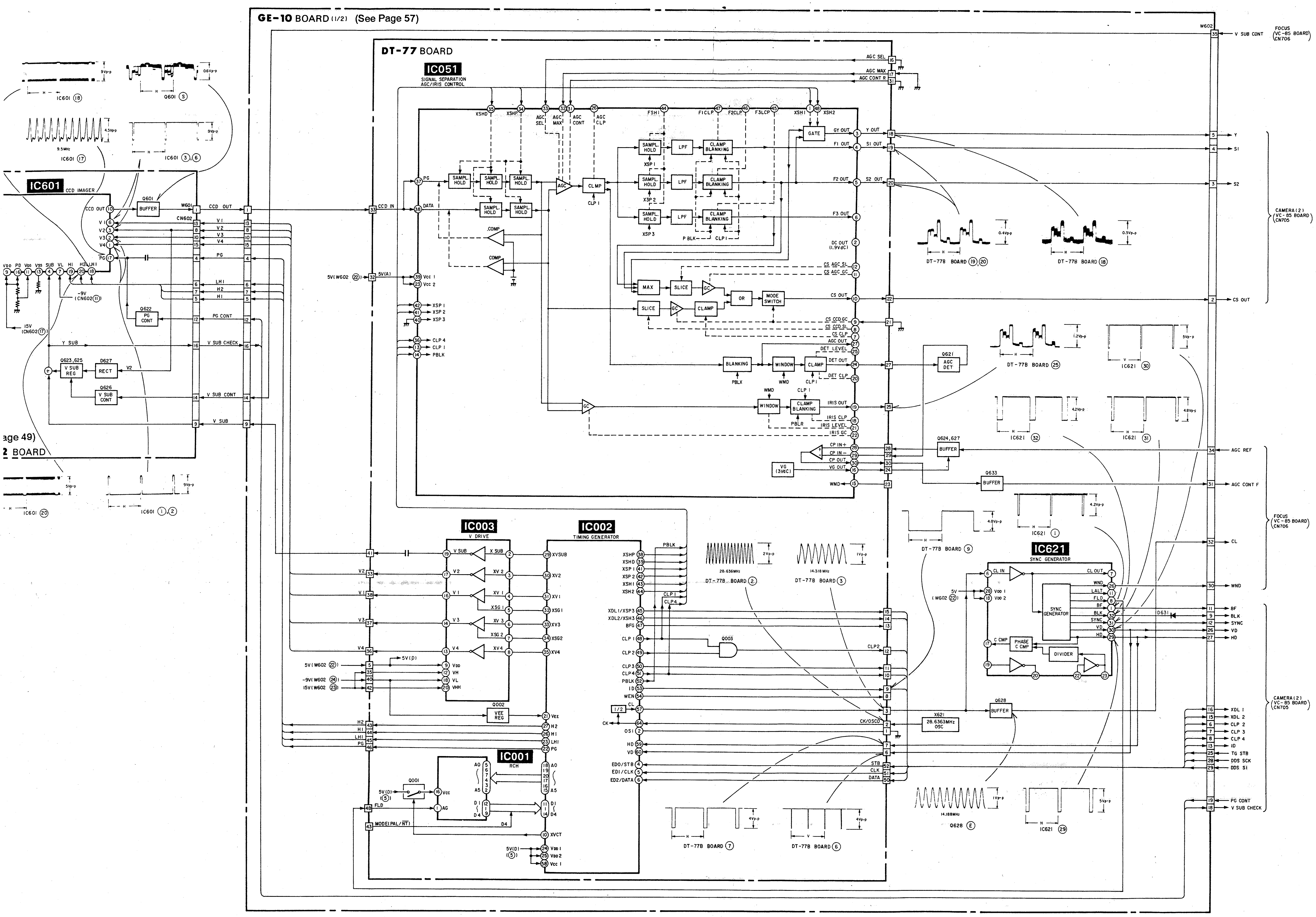
3-2. OVERALL BLOCK DIAGRAM


VC-85 BOARD (See Page 61, 94)
GE-10 BOARD
(See Page 57)
LENS
CCD IMAGER
CCD OUT
SIGNAL SEPARATION AGC/IRIS CONTROL
AGC CONT.
S AGC CONT.
IRIS CONT
Y
SI
SUB
PG
H1
H2
V1
V4
TIMING GENERATOR
CLPO 23XDL 12
DT-77B
SYNC GENERATOR
VD HD
SYNC 4FSC BF BLK
MX-7PH
S2
MATRIX
1H DELAY
RGB
YH
IC702
PROCESS
B-Y
IC705
ENCODER
C
Y
COLOR BALANCE CONT.
EVR
IC703
IC704
IC803
IC804
IC802
AWB DETECT
EVR/ AUTO WHUTE BALANCE CPU
SI SO BUS
IRIS CONT.
AGC CONT.
IRIS REF
IC905
IC907
AGC
IRIS
AUTO FOCUS CPU
FOCUS SPEED
N
F
FOCUS FG
FOCUS
END
IC904
VD HD
AGCCONT
YH
HALL DUT
AUTO FOCUS PROCESS
A/D CONV.
EVR D/A
IC901
IC906
PJ-43 BOARD
(See Page 102)
S-OUT
C
Y
VIDED-OUT
RFUDC
AUDIO-OUT
BUFFER
COLOR GAIN CONT.
BUFFER
Y/C MIX
CURRENT LIMITER
6V
5V REG
5V
5V
D/D CONVERTER
5V
15V
-9V
MC-65 BOARD
(See Page 101)
MIC-IN
RV001
ATT
MICAMP
IC206
POWER SW
AC-IN
POWER BLOCK
6V
12V
DC/AC CONVERTER
FR
MANUAL IRS
HOLD W.B
RV102
RV104
COLOR LEVEL
IRIS
DDS CPU
COLOR BALANCE
IC103
VD
CYNCHRO
KEY MATRIX
NEGA/POSI
FOCUS
ZOOM
(See Page 101)
FA-1 BOARI

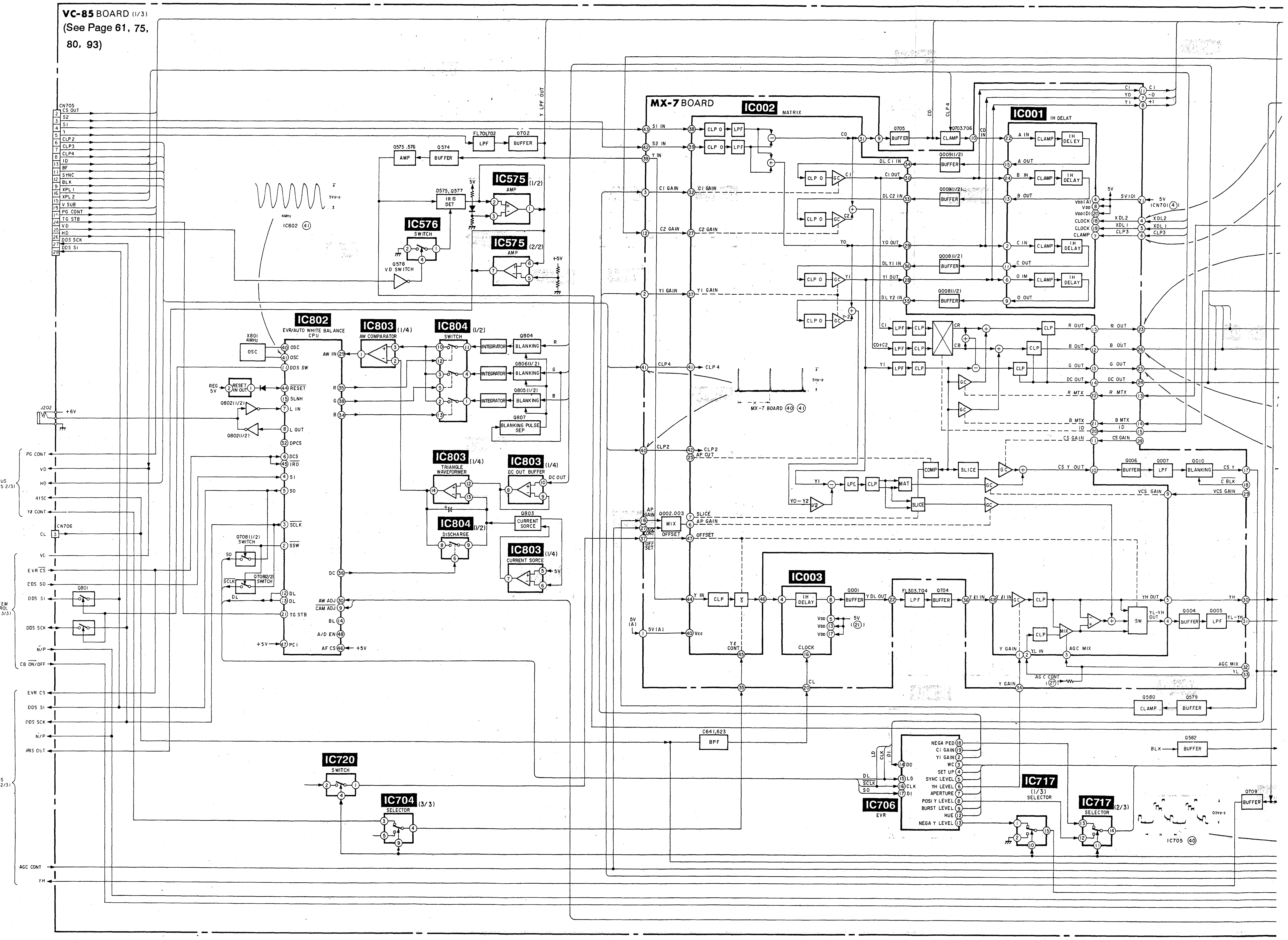

VC-85 BOARD (See Page 61, 94)
IRIS CONT
IRIS CONT.
YH
AGC CONT.
MX-7PH
IC702
IC705
IC905
IC907
S2
MATRIX
RGB
YH
PROCESS
B-Y
B-Y
ENCODER
C
Y
I H DELAY
COLOR BALANCE CONT.
EVR
IC703
IC704
IC904
VD HD
AGCCONT
YH
AUTO FOCUS PROCESS
HALL DUT
A/D CONV.
IC901
AUTO FOCUS CPU
AGC
IRIS
FOCUS SPEED
N
F
FOCUS FG
FOCUS
END
EVR D/A
IC906
IRIS REF
IRIS DRIVE
HALL
FOCUS MOTOR DRIVE
ZOOM MOTOR DRIVE
M
M
M
(See Page 57)
GE-10 BOARD
IC803
IC804
IC802
AWB DETECT
EVR/ AUTO WHUTE BALANCE CPU
COLOR BALANCE
JS-22 BOARD
(See Page 102)
SO BUS
RV102
RV104
COLOR LEVEL
IRIS
MANUAL IRS
HOLD W.B
DDS CPU
KEY MATRIX
COLOR BALANCE
IC103
VD
CYNCHRO
NEGA/POSI
COLOR GAIN CONT.
C
Y/C MIX
Y
5V
5V
5V
15V
-9V
FR
FOCUS
ZOOM
(See Page 101)
FA-1 BOARD

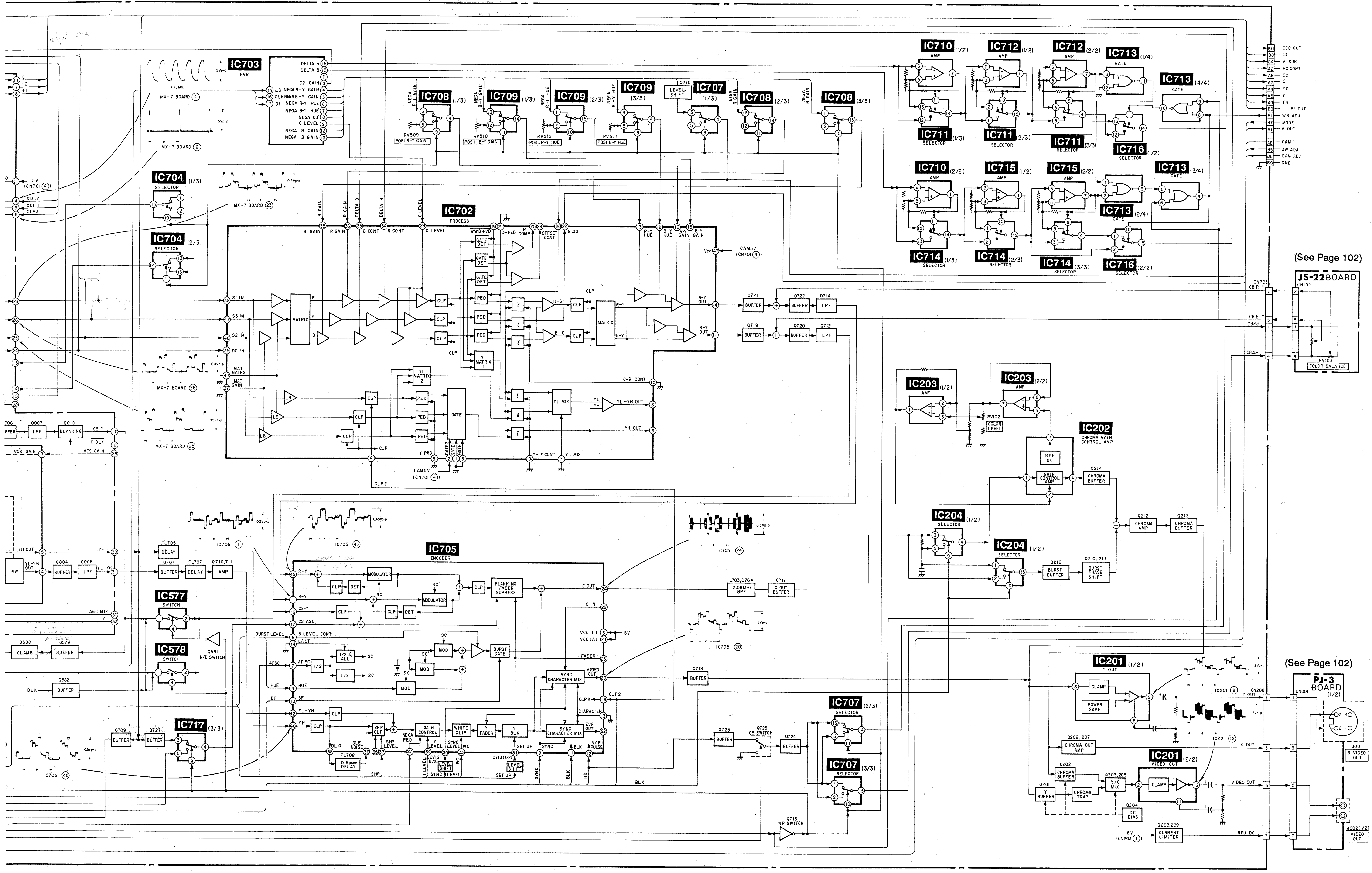
3-3. CAMERA (1) BLOCK DIAGRAM


GE-10 BOARD (1/2) (See Page 57)
DT-77 BOARD
IC051
SIGNAL SEPARATION AGC/IRIS CONTROL
IC601
CCD IMAGER
Q601
BUFFER
W601
CN602
CCD OUT
V1
V2
V3
V4
PG
LH1
H2
H1
PG CONT
Q622
PG CONT
Y SUB
V SUB CHECK
Q623,625
V SUB REG
D627
RECT
Q626
V SUB CONT
V SUB CONT
V SUB
-9V (CN602 ⑪)
15V (CN602 ⑰)
(See Page 49)
CD-52 BOARD
IC601 ⑱
Q601 Ⓢ
IC601 ⑰
IC601 ③,⑥
IC601 ⑳
IC601 ①,②
9.5MHz
CCD IN
DATA
5V(A)
5V(W602 ㉒)
Vcc 1
Vcc 2
XSP 1
XSP 2
XSP 3
CLP 4
CLP 1
PBLK
XSHD
XSHP
AGC SEL
AGC MAX
AGC CONT
AGC CLP
FSH1
F1CLP
F2CLP
F3LCP
XSH1
SAMPL. HOLD
COMP
AGC
CLMP
LPF
CLAMP BLANKING
MAX
SLICE
GC
OR
MODE SWITCH
CLAMP
BLANKING
WINDOW
WMD
PBLX
PBLR
VG (3V6C)
IC003
V DRIVE
IC002
TIMING GENERATOR
X SUB
XV2
XV1
XSG1
XV3
XSG2
XV4
XVSUB
VDD
VH
VL
VHH
Q002
VEE REG
VEE
5V(D)
-9V(W602 ㉔)
15V(W602 ㉓)
XSHP
XSHD
XSH1
XSH2
XDL1/XSP3
XDL2/XSH3
BFG
CLP 1
CLP 2
CLP 3
CLP 4
PBLK
ID
WEN
CL
1/2
CK
OSI
HD
VD
ED0/STB
ED1/CLK
ED2/DATA
Q003
IC001
RCH
Q001
FLD
MODE(PAL/NT)
A0
A5
D1
D4
AG
XVCT
VDD1
VDD2
Vcc1
28.636MHz
DT-77B BOARD ②
DT-77B BOARD ⑦

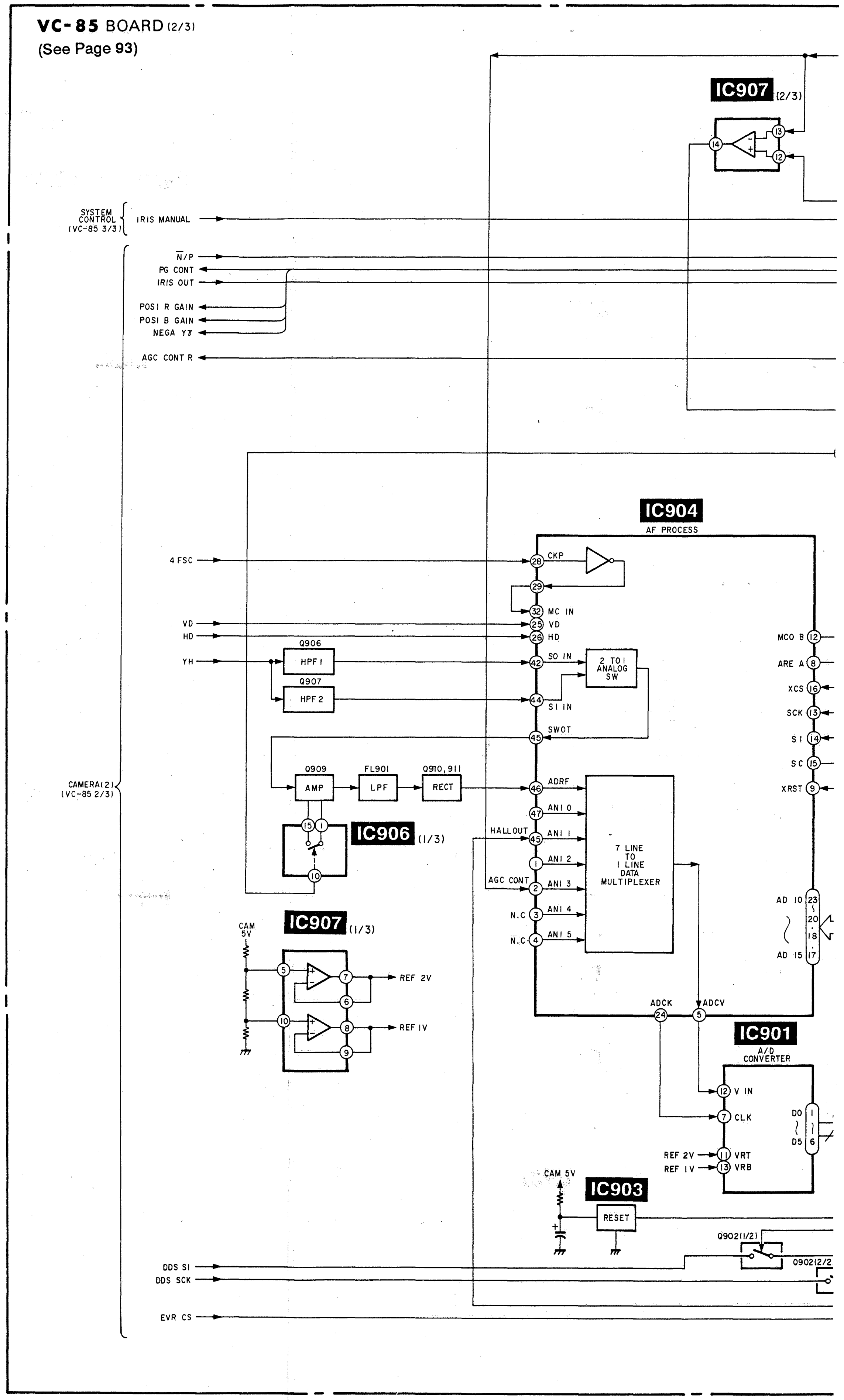

GE-10 BOARD (1/2) (See Page 57)
DT-77 BOARD
IC051
SIGNAL SEPARATION AGC/IRIS CONTROL
IC601
CCD IMAGER
IC003
V DRIVE
IC002
TIMING GENERATOR
IC001
RCH
IC621
SYNC GENERATOR
SAMPL. HOLD
AGC
CLMP
LPF
CLAMP BLANKING
GATE
MAX
SLICE
GC
OR
MODE SWITCH
CLAMP
BLANKING
WINDOW
AGC DET
BUFFER
V SUB REG
RECT
V SUB CONT
PG CONT
VEE REG
SYNC GENERATOR
PHASE C CMP
DIVIDER
28.6363MHz OSC
Y OUT
S1 OUT
S2 OUT
CS OUT
CCD OUT
CCD IN
V SUB CONT
FOCUS (VC-85 BOARD) CN706
CAMERA (2) (VC-85 BOARD) CN705
Y
S1
S2
CS OUT
AGC REF
AGC CONT F
CL
WND
BF
BLK
SYNC
VD
HD
XDL 1
XDL 2
CLP 2
CLP 3
CLP 4
ID
TG STB
DDS SCK
DDS SI
PG CONT
V SUB CHECK
W601
W602
CN602
DT-77B BOARD (19) (20)
DT-77B BOARD (18)
DT-77B BOARD (25)
DT-77B BOARD (2)
DT-77B BOARD (3)
DT-77B BOARD (9)
DT-77B BOARD (7)
DT-77B BOARD (6)
IC621 (30)
IC621 (32)
IC621 (31)
IC621 (1)
IC621 (29)
Q628 (E)
IC601 (18)
Q601 (S)
IC601 (17)
IC601 (3),(6)
IC601 (20)
IC601 (1),(2)
28.636MHz
14.318MHz
14.188MHz
9.5MHz
age 49)
2 BOARD

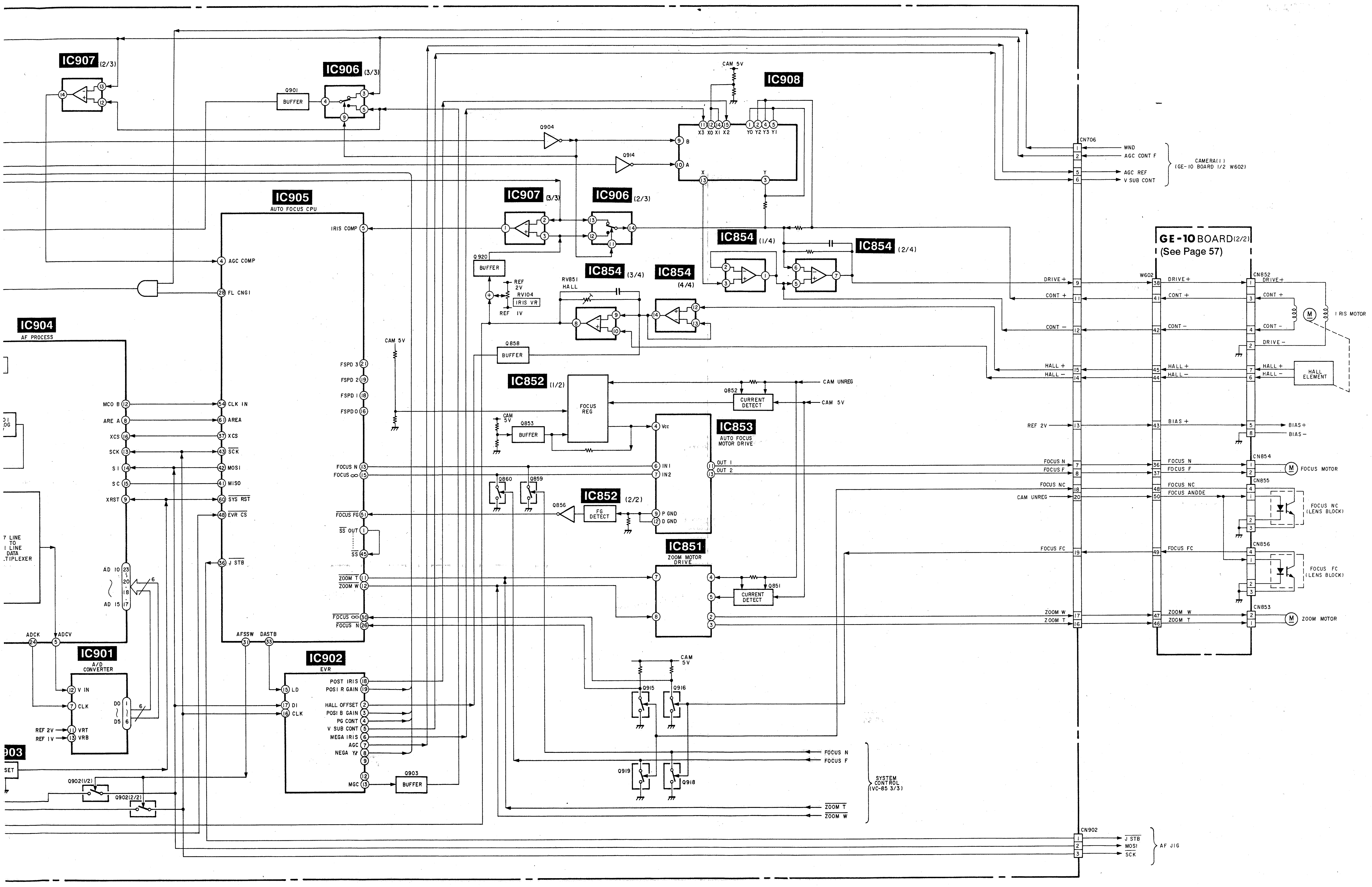
3-4. CAMERA (2) BLOCK DIAGRAM


VC-85 BOARD (1/3)
(See Page 61, 75, 80, 93)
MX-7 BOARD
CN705
CN706
IC002 MATRIX
IC001 1H DELAY
IC003
IC575 (1/2) AMP
IC575 (2/2) AMP
IC576 SWITCH
IC802 EVR/AUTO WHITE BALANCE CPU
IC803 (1/4) AW COMPARATOR
IC804 (1/2) SWITCH
IC803 (1/4) TRIANGLE WAVEFORMER
IC803 (1/4) DC OUT BUFFER
IC804 (1/2) DISCHARGE
IC803 (1/4) CURRENT SORCE
IC720 SWITCH
IC704 (3/3) SELECTOR
IC706 EVR
IC717 (1/3) SELECTOR
IC717 (2/3) SELECTOR
FOCUS (VC-85 2/3)
SYSTEM CONTROL (VC-85 3/3)
FOCUS (VC-85 2/3)
PG CONT
VD
HD
4fsc
Y8 CONT
CL
VE
EVR CS
DDS SO
DDS SI
DDS SCK
N/P
CB ON/OFF
EVR CS
DDS SI
DDS SCK
N/P
IRIS OUT
AGC CONT
YH
MX-7 BOARD 40 41
IC802 41
IC705 40

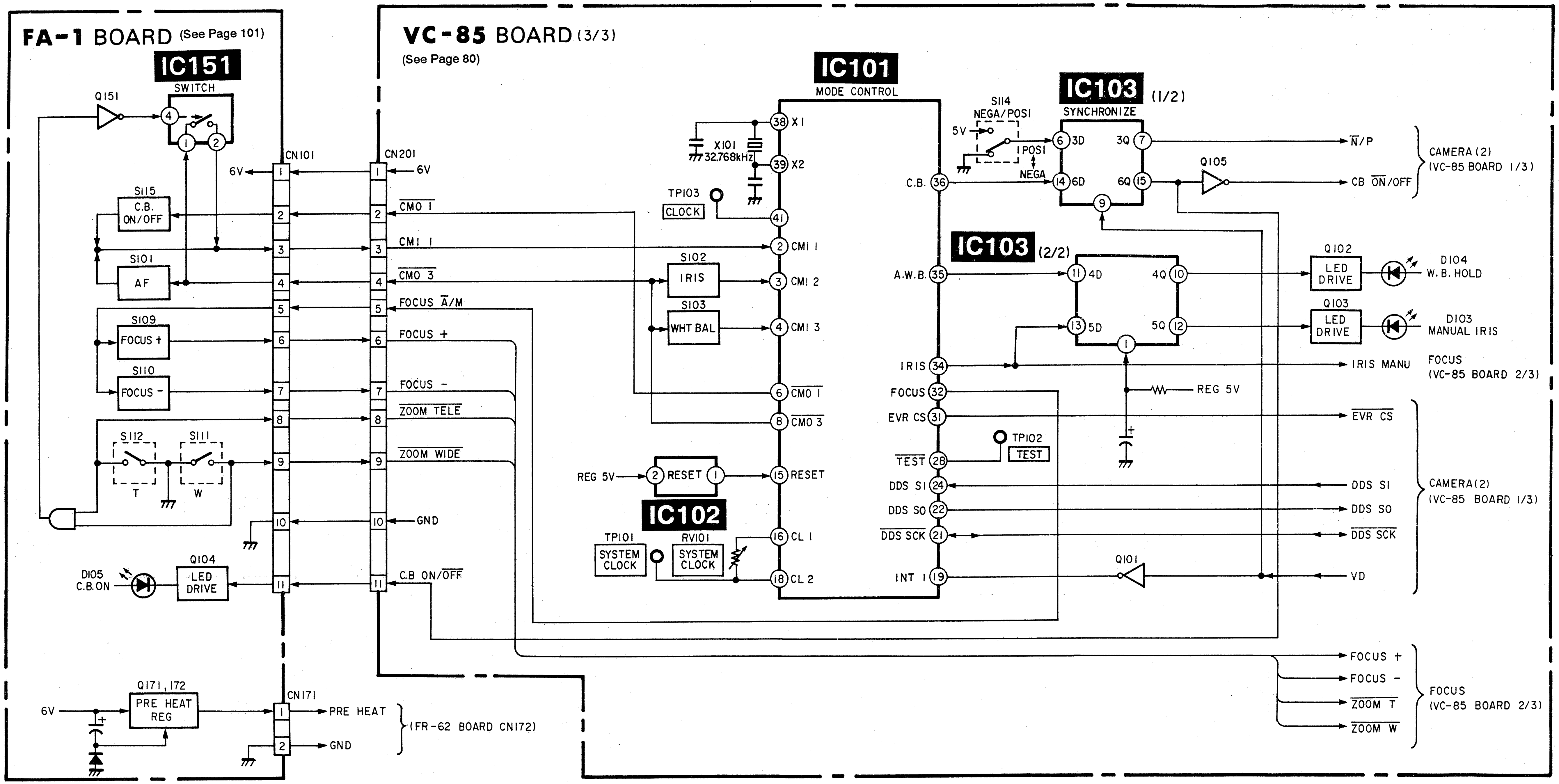

IC703
EVR
IC702
PROCESS
IC704 (1/3)
SELECTOR
IC704 (2/3)
SELECTOR
IC708 (1/3)
IC709 (1/3)
IC709 (2/3)
IC709 (3/3)
IC707 (1/3)
IC708 (2/3)
IC708 (3/3)
LEVEL SHIFT
Q715
RV509 POSI R-Y GAIN
RV510 POSI B-Y GAIN
RV512 POSI R-Y HUE
RV511 POSI B-Y HUE
NEGA R-Y GAIN
NEGA B-Y GAIN
NEGA R-Y HUE
NEGA B-Y HUE
NEGA R GAIN
NEGA B GAIN
DELTA R
DELTA B
C2 GAIN
NEGA R-Y GAIN
NEGA B-Y GAIN
NEGA R-Y HUE
NEGA B-Y HUE
NEGA CZ
C LEVEL
LD
CLK
DI
MX-7 BOARD ④
MX-7 BOARD ⑥
MX-7 BOARD ㉓
MX-7 BOARD ㉖
MX-7 BOARD ㉕
5Vp-p
4.73MHz
0.2Vp-p
0.4Vp-p
0.5Vp-p
5V (CN701 ④)
XDL2
XDL1
CLP3
C I
-0
+I
B GAIN
R GAIN
B CONT
R CONT
C LEVEL
WWD+VD
C-PED
R COMP
OFFSET CONT
G OUT
R-Y HUE
B-Y HUE
B-Y GAIN
R-Y GAIN
Vcc
CAM5V (CN701 ④)
S1 IN
S3 IN
S2 IN
DC IN
MAT GAIN2
MAT GAIN1
MATRIX
GATE DET
PED
CLP
γ
R-G
B-G
R-Y
B-Y
R-Y OUT
B-Y OUT
YL MATRIX 1
YL MATRIX 2
LB
GATE
YL MIX
YL-YH OUT
YH OUT
C-γ CONT
Y-γ CONT
Y PED
CLP2
Q721 BUFFER
Q722 BUFFER
Q714 LPF
Q719 BUFFER
Q720 BUFFER
Q712 LPF
IC710 (1/2) AMP
IC712 (1/2) AMP
IC712 (2/2) AMP
IC713 (1/4) GATE
IC713 (4/4) GATE
IC711 (1/3) SELECTOR
IC711 (2/3) SELECTOR
IC711 (3/3) SELECTOR
IC716 (1/2) SELECTOR
IC710 (2/2) AMP
IC715 (1/2) AMP
IC715 (2/2) AMP
IC713 (3/4) GATE
IC713 (2/4) GATE
IC714 (1/3) SELECTOR
IC714 (2/3) SELECTOR
IC714 (3/3) SELECTOR
IC716 (2/2) SELECTOR
CCD OUT
ID
V SUB
PG CONT
CO
CI
YO
YI
YH
L LPF OUT
WB ADJ
MODE
G OUT
CAM Y
AW ADJ
CAM ADJ
GND
(See Page 102)
JS-22 BOARD
CN703
CN102
CB R-Y
CB B-Y
CBΔ+
CBΔ-
RV103 COLOR BALANCE
IC203 (1/2) AMP
IC203 (2/2) AMP
RV102 COLOR LEVEL
IC202
CHROMA GAIN CONTROL AMP
REP DC
GAIN CONTROL AMP
Q214 CHROMA BUFFER
Q212 CHROMA AMP
Q213 CHROMA BUFFER
IC204 (1/2) SELECTOR
IC204 (1/2) SELECTOR
Q216 BURST BUFFER
Q210,211 BURST PHASE SHIFT
IC705
ENCODER
IC705 ①
IC705 ㊺
IC705 ㉔
IC705 ⑳
IC705 ㊵
0.45Vp-p
0.3Vp-p
1Vp-p
MODULATOR
SC
SC'
CLP
DET
BLANKING FADER SUPRESS
C OUT
C IN
VCC(D)
VCC(A)
5V
FADER
VIDEO OUT
CHARACTER
EVF OUT
N/P PULSE
BURST GATE
MOD
1/2 & ALL
1/2
SYNC CHARACTER MIX
SHP CLP
GAIN CONTROL
WHITE CLIP
Y FADER
Y BLK
DLE NOISE
SHP LEVEL
NEGA PED
Y LEVEL
SYNC LEVEL
WC
SET UP
SYNC
BLK
HD
FL708 0.18μsec DELAY
Q713 (1/2)
LEVEL SHIFT
Q713 (1/2) LEVEL SHIFT
R-Y
B-Y
CS-Y
CS AGC
BURST LEVEL
B LEVEL CONT
LALT
4FSC
AF SC
HUE
BF
YL-YH
YH
DL O
L703,C764 3.58MHz BPF
Q717 C OUT BUFFER
Q718 BUFFER
Q723 BUFFER
Q725 CB SWITCH
Q724 BUFFER
IC707 (2/3) SELECTOR
IC707 (3/3) SELECTOR
Q716 NP SWITCH
Q006 BUFFER
Q007 LPF
Q010 BLANKING
CS Y
C BLK
VCS GAIN
YH OUT
YL-YH OUT
SW
Q004 BUFFER
Q005 LPF
FL705 DELAY
Q707 BUFFER
FL707 DELAY
Q710,711 AMP
AGC MIX
YL
IC577 SWITCH
IC578 SWITCH
Q581 N/D SWITCH
Q580 CLAMP
Q579 BUFFER
Q582 BUFFER
BLK
Q709 BUFFER
Q727 BUFFER
IC717 (3/3)
0.5Vp-p
IC201 (1/2) Y OUT
CLAMP
POWER SAVE
IC201 ⑨
IC201 ⑫
2Vp-p
Y OUT
CN208
C OUT
Q206,207 CHROMA OUT AMP
IC201 (2/2) VIDEO OUT
Q202 CHROMA BUFFER
Q203,205 Y/C MIX
Q201 Y BUFFER
CHROMA TRAP
Q204 DC BIAS
VIDEO OUT
6V (CN203 ①)
Q208,209 CURRENT LIMITER
RFU DC
(See Page 102)
PJ-3 BOARD (1/2)
CN001
J001 S VIDEO OUT
J002(1/2) VIDEO OUT

3-5. FOCUS BLOCK DIAGRAM


VC-85 BOARD (2/3)
(See Page 93)
IC907 (2/3)
14
13
12
SYSTEM CONTROL (VC-85 3/3)
IRIS MANUAL
N̄/P
PG CONT
IRIS OUT
POSI R GAIN
POSI B GAIN
NEGA Yγ
AGC CONT R
CAMERA(2) (VC-85 2/3)
4 FSC
VD
HD
YH
Q906
HPF 1
Q907
HPF 2
Q909
AMP
FL901
LPF
Q910, 911
RECT
IC906 (1/3)
15
1
10
IC907 (1/3)
CAM 5V
5
7
6
10
8
9
REF 2V
REF 1V
IC904
AF PROCESS
28 CKP
29
32 MC IN
25 VD
26 HD
42 SO IN
44 S1 IN
45 SWOT
2 TO 1 ANALOG SW
46 ADRF
47 ANI 0
HALLOUT
45 ANI 1
1 ANI 2
AGC CONT
2 ANI 3
N.C 3 ANI 4
N.C 4 ANI 5
7 LINE TO 1 LINE DATA MULTIPLEXER
MCO B 12
ARE A 8
XCS 16
SCK 13
S1 14
SC 15
XRST 9
AD 10 23
20
18
AD 15 17
ADCK 24
ADCV 5
IC901
A/D CONVERTER
12 V IN
7 CLK
REF 2V 11 VRT
REF 1V 13 VRB
D0 1
D5 6
CAM 5V
IC903
RESET
Q902(1/2)
Q902(2/2
DDS S1
DDS SCK
EVR CS


IC907 (2/3)
IC906 (3/3)
Q901 BUFFER
CAM 5V
IC908
X3 X0 X1 X2
Y0 Y2 Y3 Y1
Q904
Q914
B
A
X
Y
IC905
AUTO FOCUS CPU
IRIS COMP
AGC COMP
FL CNG1
IC907 (3/3)
IC906 (2/3)
Q920 BUFFER
REF 2V
RV104 IRIS VR
REF 1V
RV851 HALL
IC854 (3/4)
IC854 (4/4)
IC854 (1/4)
IC854 (2/4)
Q858 BUFFER
CAM 5V
FSPD 3
FSPD 2
FSPD 1
FSPD 0
IC852 (1/2)
FOCUS REG
CAM UNREG
Q852 CURRENT DETECT
CAM 5V
Q853 BUFFER
IC853
AUTO FOCUS MOTOR DRIVE
Vcc
IN 1
IN 2
OUT 1
OUT 2
P GND
D GND
IC904
AF PROCESS
MCO B
ARE A
XCS
SCK
SI
SC
XRST
CLK IN
AREA
XCS
SCK
MOSI
MISO
SYS RST
EVR CS
J STB
FOCUS N
FOCUS ∞
FOCUS FG
SS OUT
SS
ZOOM T
ZOOM W
FOCUS ∞
FOCUS N
Q860
Q859
Q856
IC852 (2/2)
FG DETECT
IC851
ZOOM MOTOR DRIVE
Q851 CURRENT DETECT
7 LINE TO 1 LINE DATA MULTIPLEXER
AD 10
AD 15
ADCK
ADCV
IC901
A/D CONVERTER
V IN
CLK
VRT
VRB
REF 2V
REF 1V
D0
D5
AFSSW
DASTB
IC902
EVR
LD
DI
CLK
POST IRIS
POSI R GAIN
HALL OFFSET
POSI B GAIN
PG CONT
V SUB CONT
MEGA IRIS
AGC
NEGA Yr
MGC
Q903 BUFFER
903
SET
Q902(1/2)
Q902(2/2)
CAM 5V
Q915
Q916
Q919
Q918
FOCUS N
FOCUS F
SYSTEM CONTROL (VC-85 3/3)
ZOOM T
ZOOM W
CN706
WND
AGC CONT F
AGC REF
V SUB CONT
CAMERA(1) (GE-10 BOARD 1/2 W602)
DRIVE +
CONT +
CONT −
HALL +
HALL −
REF 2V
FOCUS N
FOCUS F
FOCUS NC
CAM UNREG
FOCUS FC
ZOOM W
ZOOM T
GE-10 BOARD(2/2)
(See Page 57)
W602
CN852
DRIVE +
CONT +
CONT −
DRIVE −
HALL +
HALL −
BIAS +
IRIS MOTOR
HALL ELEMENT
BIAS +
BIAS −
CN854
FOCUS MOTOR
CN855
FOCUS NC
FOCUS ANODE
FOCUS NC (LENS BLOCK)
CN856
FOCUS FC
FOCUS FC (LENS BLOCK)
CN853
ZOOM MOTOR
CN902
J STB
MOSI
SCK
AF JIG

3-6. SYSTEM CONTROL BLOCK DIAGRAM


FA-1 BOARD (See Page 101)
IC151
SWITCH
Q151
S115
C.B. ON/OFF
S101
AF
S109
FOCUS +
S110
FOCUS −
S112
S111
T
W
Q104
LED DRIVE
D105
C.B.ON
CN101
6V
Q171, 172
PRE HEAT REG
6V
CN171
PRE HEAT
GND
(FR-62 BOARD CN172)
VC-85 BOARD (3/3)
(See Page 80)
CN201
6V
CMO 1
CMI 1
CMO 3
FOCUS A/M
FOCUS +
FOCUS −
ZOOM TELE
ZOOM WIDE
GND
C.B ON/OFF
IC101
MODE CONTROL
X101
32.768kHz
X1
X2
TP103
CLOCK
S102
IRIS
S103
WHT BAL
CMI 1
CMI 2
CMI 3
CMO 1
CMO 3
REG 5V
RESET
IC102
TP101
SYSTEM CLOCK
RV101
SYSTEM CLOCK
CL 1
CL 2
C.B.
A.W.B.
IRIS
FOCUS
EVR CS
TEST
TP102
TEST
DDS SI
DDS SO
DDS SCK
INT 1
S114
NEGA/POSI
5V
POSI
NEGA
IC103 (1/2)
SYNCHRONIZE
3D
6D
3Q
6Q
Q105
N/P
CB ON/OFF
CAMERA (2)
(VC-85 BOARD 1/3)
IC103 (2/2)
4D
5D
4Q
5Q
Q102
LED DRIVE
D104
W.B. HOLD
Q103
LED DRIVE
D103
MANUAL IRIS
IRIS MANU
FOCUS
(VC-85 BOARD 2/3)
REG 5V
EVR CS
DDS SI
DDS SO
DDS SCK
Q101
VD
CAMERA (2)
(VC-85 BOARD 1/3)
FOCUS +
FOCUS −
ZOOM T
ZOOM W
FOCUS
(VC-85 BOARD 2/3)

3-7. DESCRIPTION OF SYSTEM CONTROL BLOCK

The system control block consists of the three micro processors listed below.

- DDS Micro processor μPD7508BGB
- EVR Micro processor MC68HC05N4FU
- AF Micro processor MC68HC05C4FU

3-7-1. DDS Micro Processor μPD7508BGB (IC101 on VC-85 board)

1. Description of functions

1) Internal data communication control
2) Key matrix reading
   (White balance, focus mode, iris mode, color balance mode)

2. Terminal functions and input/output levels (μPD7508BGB)

Pin No.	Signal Name	I/O	Function and Input/Output Level
1	CMI 0	I	Key matrix input signal. Normally "H" 1V period "L" pulse when there is key input
2	CMI 1	I	
3	CMI 2	I	
4	CMI 3	I	
5	$\overline{\text{CMO 0}}$	O	Key matrix output signal 1V period "L" pulse
6	$\overline{\text{CMO 1}}$	O	
7	$\overline{\text{CMO 2}}$	O	
8	$\overline{\text{CMO 3}}$	O	
9	——	–	——
10	——	–	——
11	——	–	——
12	——	–	——
13	——	–	——
14	——	–	——
15	RESET	I	Reset input, Normally "L"
16	CL 1	I	System clock oscillation terminal, 330 kHz when operating
17	VDD	–	Power supply input terminal
18	CL 2	O	System clock oscillation terminal.
19	INT 1	I	Interrupting input by camera VD, 1V period "H" pulse
20	GND	–	——
21	$\overline{\text{DDS SCK}}$	I/O	Serial communication serial clock input/output, V period "L" pulse row
22	DDS SO	O	Serial communication data output, V period "H" pulse row
23	——	–	——
24	DDS SI	I	Serial communication data input, V period "L" pulse row
25	——	–	——
26	POWER	I	5V power supply detection, "H" when power is on
27	——	–	——
28	$\overline{\text{TEST}}$	I	Test mode input, Normally "H"
29	——	–	——
30	——	–	——
31	$\overline{\text{EVR CS}}$	O	Chip select signal for EVR micro processor, 1V period "L" pulse
32	——	O	——
33	FOCUS	O	Focus mode output, Manual mode "H"
34	IRIS	O	Iris mode output, Manual mode "H"
35	WHITE BALANCE	O	White balance mode output, Hold mode "H"
36	COLOR BALANCE	–	Color balance mode output, Color balance on "H"
37	Vss	I	GND
38	X1	O	Crystal oscillation circuit input for clock, 32.768 kHz
39	X2	–	Crystal oscillation circuit output for clock, 32.768 kHz
40	——	–	——
41	——	–	——
42	——	–	——
43	——	–	——
44	——	–	——

3-7-2. EVR Micro Processor MC68HC05N4FU (IC802 on VC-85 board)

1. Description of functions.

1) EVR control
2) Automatic white balance control

2. Terminal functions and input/output levels (MC68HC05N4FU)

Pin No.	Signal Name	I/O	Function and Input/Output Level
1	———	–	———
2	$\overline{\text{SSW}}$	O	"H" only when communicating with serial switchover D/A converter, V period "H" pulse
3	$\overline{\text{SCLK}}$	O	Serial clock output, V period "L" pulse row
4	SI	I	Serial data input, V period "H" pulse row
5	SO	O	Serial data output, V period "L" pulse row
6	$\overline{\text{EVR CS}}$	I	Communication demand from DDS, V period "L" pulse
7	L IN	I	LANC input, L: 0, H: 1, V period "H" pulse row
8	L OUT	O	LANC output, L: 0, H: 1, V period "H" pulse row
9	$\overline{\text{CAM ADJ}}$	I	NORMAL/ADJUST switchover, Normally "H". "L" during adjustment
10	———	–	———
11	SSW	O	Serial signal switchover, V period "L" pulse
12, 13	LD	O	Data load command for EVR (IC703, IC706), V period "H" pulse
14	———	–	———
15	IRIS I/O	I	IN DOOR/OUT DOOR discrimination input, H: IN DOOR, L: OUT DOOR
16	———	–	———
17	VDD	–	Connected to REG 5V
18	GND	–	GND
19	———	–	———
20	PAL/$\overline{\text{NTSC}}$	I	Broadcasting method selection, L: NTSC, H: PAL
21	TG STB	–	Timing generator strobe signal
22	GND	–	———
23	GND	–	———
24, 25	GND	–	———
26	GND	–	———
27	GND	–	———
28	CAM 5V	I	Camera power rising is observed. L: CAM OFF, H: CAM ON
29	AW IN	I	AWS A/D timer is stopped. Pattern drive interruption, Normally 2V period pulse
30	AW ADJ	O	AWS preset data is taken in. Normally "L", "H" during auto white balance adjustment
31	———	–	———
32	———	–	———
33	———	–	———
34	S3SW	O	AWB measurement signal selection, 3V period "H" pulse
35	S2SW	O	AWB measurement signal selection, 3V period "H" pulse
36	DISCHG	O	Capacitor reset pulse for generating timer measurement lamp voltage, V period "H" pulse
37	———	–	———
38	S1SW	O	AWB measurement signal selection, 3V period "H" pulse
39	———	–	———
40	OSC2	O	Built-in inverter output for oscillation. Oscillation frequency: 4 MHz.
41	OSC1	I	Built-in inverter input for oscillation.
42	VDD	–	Connected to REG 5V.
43	———	–	———
44	$\overline{\text{RESET}}$	–	Normally "H", "L" during reset
45	$\overline{\text{IRQ}}$	–	Connected to $\overline{\text{EVR CS}}$ signal, V period "L" pulse
46	———	–	Connected to VDD
47	———	–	Connected to VDD
48	———	–	———

3-7-3. AF Micro Processor MC68HC05C4FU (IC905 on VC-85 board)

1. Description of functions

1) AF control
2) Power focus
3) Zoom motor drive

2. The auto focus system in this unit

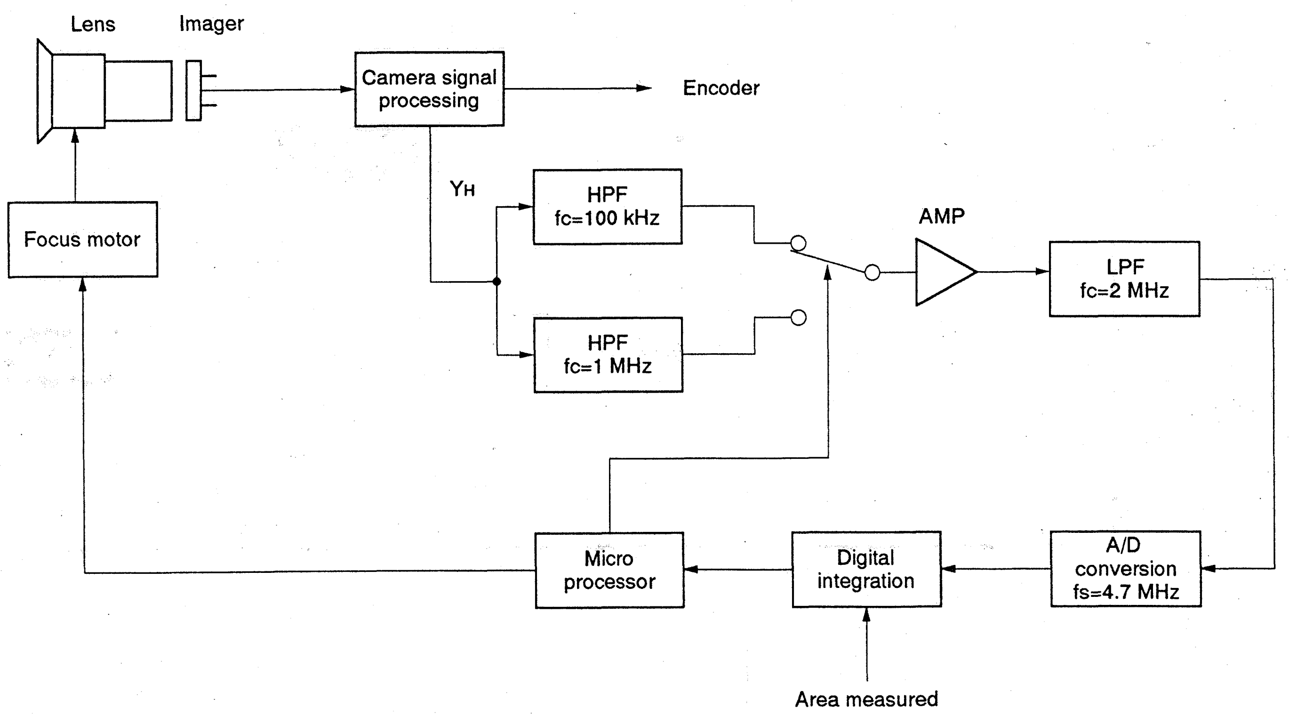
(A-AF:Image processing method)

Subjects the high frequency components of the video signal (actually the luminance signal) to micro processor processings at TTL without utilizing the external sensor, and controls the focus.

3. Outline of operations

Extracts the high frequency components of 100k to 2 MHz and 1M to 2 MHz from the luminance signal Y, and subjects these components to digital integration with every field.

This integration value known as the evaluation value. And it is used as information for auto focusing performed by controlling the focus ring while searching for the evaluation value peak, based on the concept:[When in focus → Clearer image edges → Increase in image high frequency components → Increase in evaluation value].



4. T

Pin
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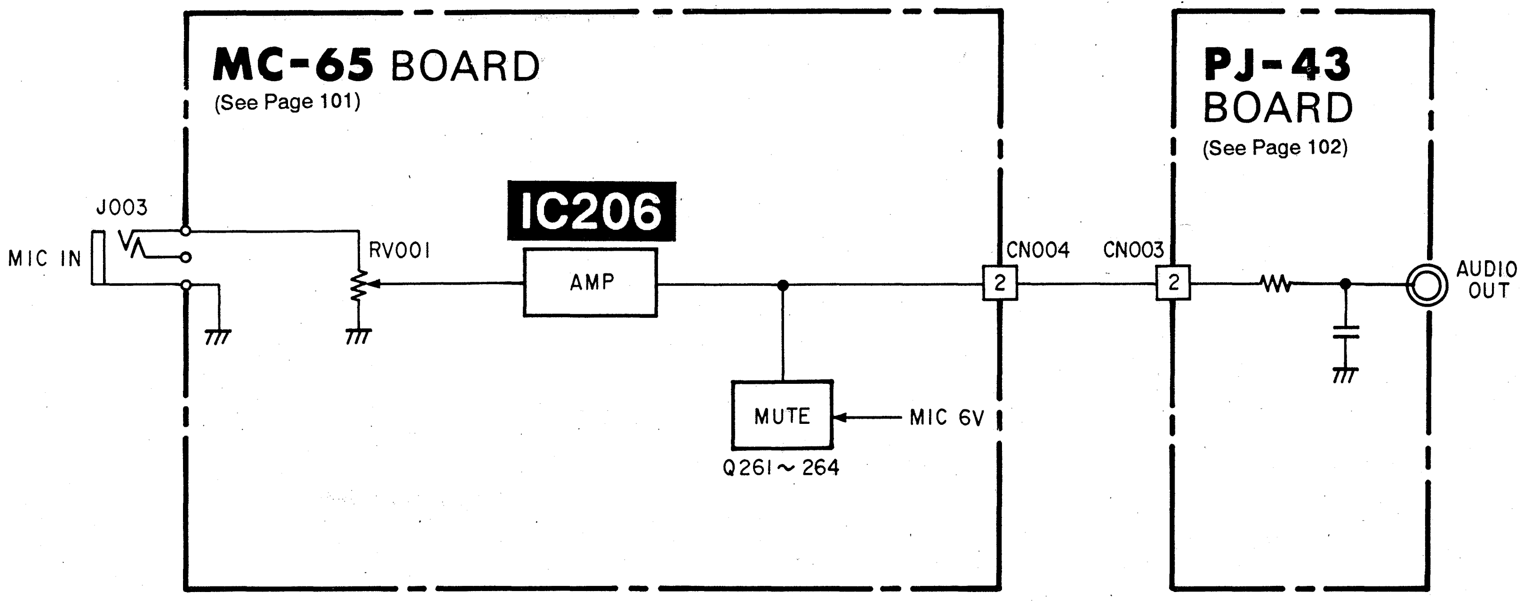
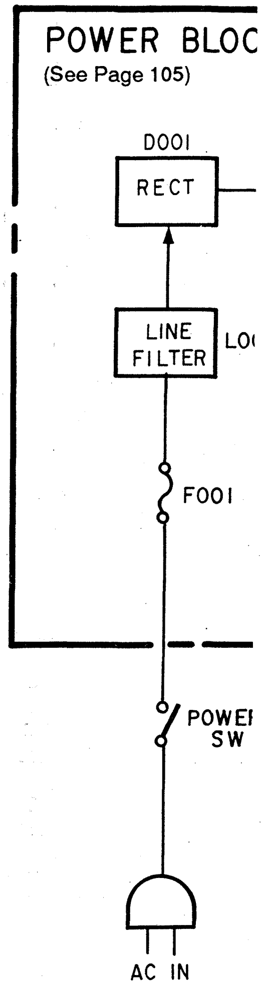
4. Terminal functions and input/output levels (MC68HC05C4FU)

Pin No.	Signal Name	I/O	Function and Input/Output Level
1	$\overline{\text{SS}}$ OUT	O	EVR data reading timing output (PD5 SS input), V period “L” pulse row
2	——	–	——
3	——	–	——
4	AGC COMP	I	EE LOCK AGC comparater
5	IRIS COMP	I	EE LOCK IRIS comparater
6	——	–	——
7	——	–	——
8	——	–	——
9	——	–	——
10	——	–	——
11	$\overline{\text{ZOOM T}}$	O	Normally “H”, “L” when the zoom motor is rotated to the TELE side
12	$\overline{\text{ZOOM W}}$	O	Normally “H”, “L” when the zoom motor is rotated to the WIDE side
13	Focus N	O	Normally “L”, “H” when the focus motor is rotated to the FAR side
14	——	–	——
15	Focucs F	O	Normally “L”. “H” when the focus motor is rotated to the NEAR side
16	F SPD ϕ	O	Focus motor speed control signal 0 bit (LSB)
17	——	–	——
18	F SPD1	O	Focus motor speed control signal 1 bit
19	F SPD2	O	Focus motor speed control signal 2 bit
20	——	–	——
21	F SPD3	O	Focus motor speed control signal 3 bit (MSB)
22	——	–	——
23	Vss	–	Connected to GND
24	Vss	–	Connected to GND
25	——	–	——
26	$\overline{\text{FOCUS NEAR}}$	I	“L” at focus ring NEAR side
27	——	–	——
28	WEIGHTING	O	Amplifies the signal from AF switch.
29	——	–	——
30	$\overline{\text{FOCUS FAR}}$	I	“L” at focus ring FAR side
31	AF SSW	O	Timing output for bus switchovers, V period “H” pulse
32	——	–	——
33	DA STB	O	D/A converter for AF, For data latch, V period “H” pulse row
34	PAL/$\overline{\text{NTSC}}$	I	PAL/NTSC switchover
35	——	–	——
36	$\overline{\text{J STB}}$	O	Exterior display tool, For data latch, V period “L” pulse
37	XCS	O	Communication demand active “L” to IC904 CXD-1204, V period “L” pulse.
38	TEST	I	Connected to VDD
39	——	–	——
40	MODE	I	Connected to VDD
41	MISO	I/O	SPI MASTER: in SLAVE: out V period “H” pulse row
42	MOSI	I/O	SPI MASTER: out SLAVE: in V period “L” pulse row
43	$\overline{\text{SCK}}$	I/O	SPI SERIAL CLOCK V period “L” pulse row
44	——	–	——
45	$\overline{\text{SS}}$	I	V period “L” pulse row
46	——	–	——
47	——	–	——
48	$\overline{\text{EVR CS}}$	I	EVR data communication demand ↓ from DDS micro processor, V period “L” pulse
49	——	–	——
50	——	–	——
51	$\overline{\text{Focus FG}}$	I	Interruption outbreak at focus MOTOR FG ↓, “L” when auto focus is off, “H” pulse of the period corresponding to the rotation speed of focus motor when the auto focus is on
52	CLK OUT	O	Waveform shaping output of pin (54) clock (1.79 MHz)
53	——	–	——
54	CLK IN	I	External clock input, The 14.3 MHz clock input to pin ㉘ of IC904 is frequency divided into 1/8 and input.
55	VDD	–	CAM 5V
56	——	–	——
57	——	–	——
58	——	–	——
59	——	–	——
60	$\overline{\text{SYS RST}}$	I	Normally “H”. “L” when reset
61	AREA	I	Interruption outbreak at ↓ from CXD-1204 (IC904). V period pulse
62	VPP	–	CAM 5V
63	——	–	——
64	——	–	——

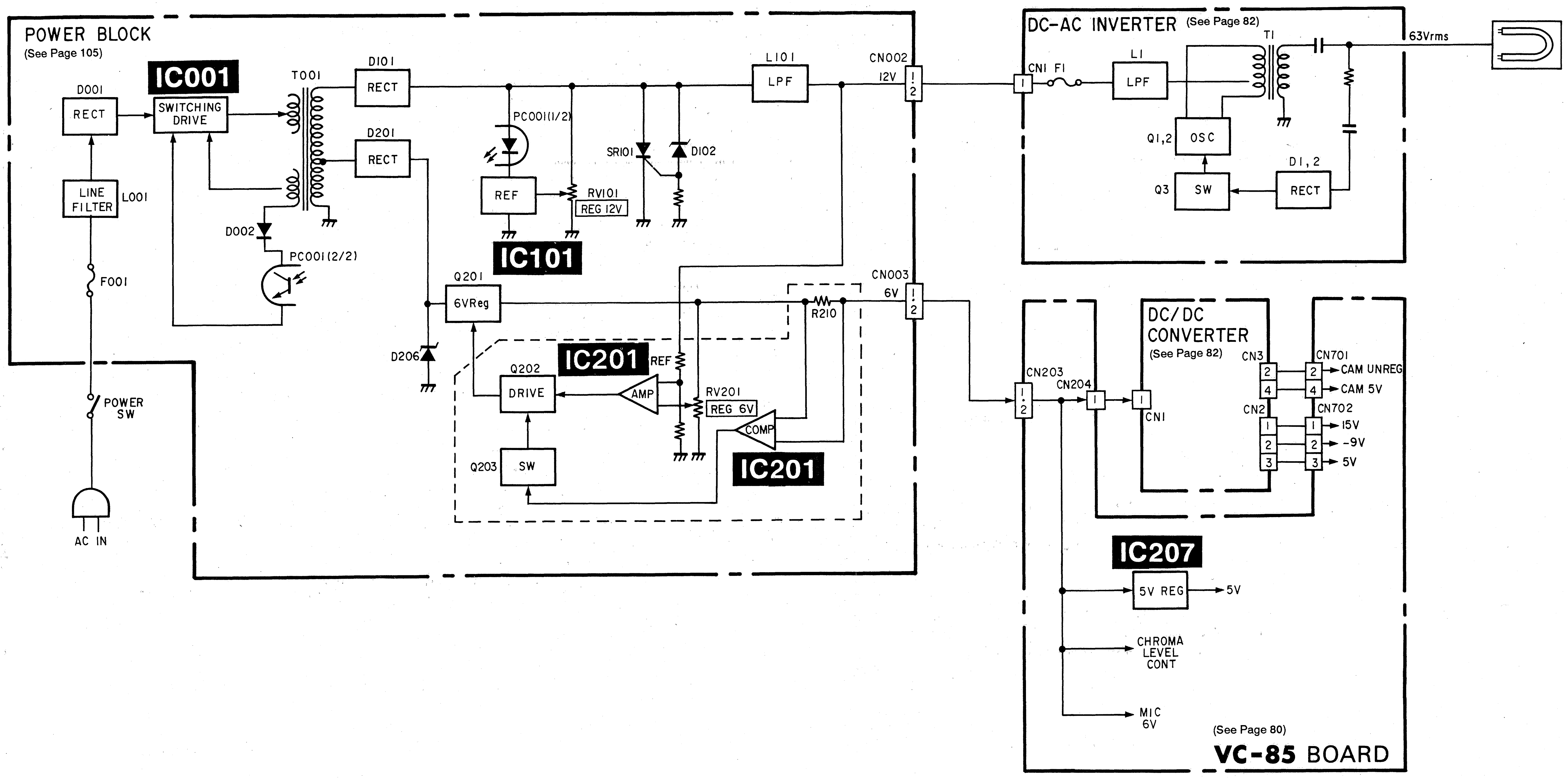
3-8. AUDIO BLOCK DIAGRAM


MC-65 BOARD
(See Page 101)
J003
MIC IN
RV001
IC206
AMP
MUTE
MIC 6V
Q261 ~ 264
CN004
2
CN003
2
PJ-43 BOARD
(See Page 102)
AUDIO OUT

3-9. POWER BLOCK DIAG


POWER BLOC
(See Page 105)
D001
RECT
LINE FILTER
LO
F001
POWE
SW
AC IN

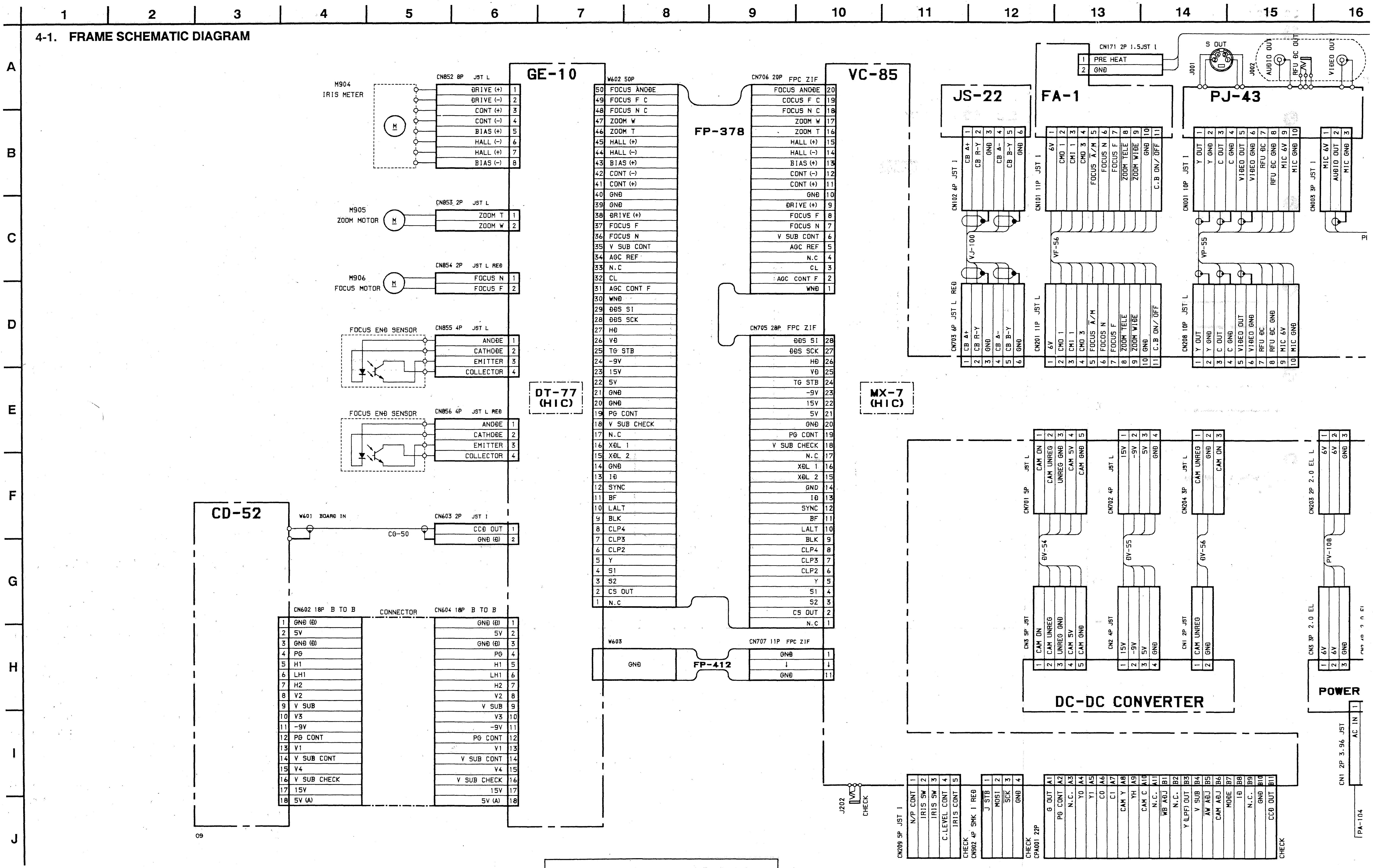
POWER BLOCK DIAGRAM


POWER BLOCK
(See Page 105)
IC001
SWITCHING DRIVE
D001
RECT
LINE FILTER
L001
F001
POWER SW
AC IN
T001
D101
RECT
D201
RECT
D002
PC001(2/2)
PC001(1/2)
REF
RV101
REG 12V
IC101
SR101
D102
L101
LPF
CN002
12V
Q201
6VReg
D206
IC201
REF
Q202
DRIVE
AMP
RV201
REG 6V
COMP
Q203
SW
IC201
R210
CN003
6V
DC-AC INVERTER (See Page 82)
CN1 F1
L1
LPF
T1
63Vrms
Q1,2
OSC
Q3
SW
D1,2
RECT
DC/DC CONVERTER
(See Page 82)
CN3
CN2
CN1
CN203
CN204
CN701
CAM UNREG
CAM 5V
CN702
15V
-9V
5V
IC207
5V REG
5V
CHROMA LEVEL CONT
MIC 6V
(See Page 80)
VC-85 BOARD

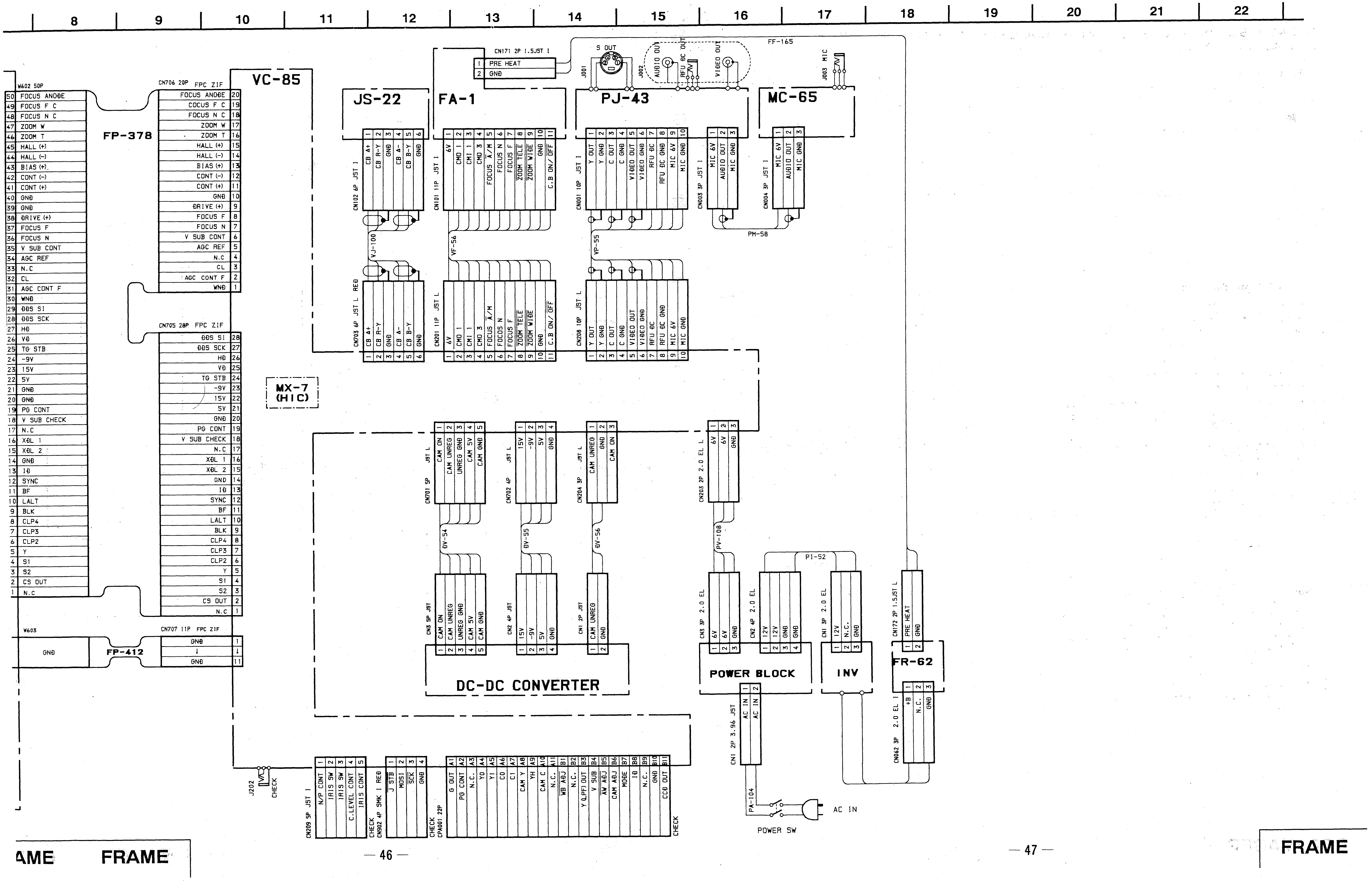
SECTION 4

PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J
GE-10
VC-85
CD-52
JS-22
FA-1
PJ-43
FP-378
FP-412
DT-77 (HIC)
MX-7 (HIC)
DC-DC CONVERTER
POWER
M904 IRIS METER
M905 ZOOM MOTOR
M906 FOCUS MOTOR
FOCUS END SENSOR
CN852 8P JST L
DRIVE (+) 1, DRIVE (−) 2, CONT (+) 3, CONT (−) 4, BIAS (+) 5, HALL (−) 6, HALL (+) 7, BIAS (−) 8
CN853 2P JST L
ZOOM T 1, ZOOM W 2
CN854 2P JST L RED
FOCUS N 1, FOCUS F 2
CN855 4P JST L
ANODE 1, CATHODE 2, EMITTER 3, COLLECTOR 4
CN856 4P JST L RED
ANODE 1, CATHODE 2, EMITTER 3, COLLECTOR 4
W601 BOARD IN
CG-50
CN603 2P JST I
CCD OUT 1, GND (D) 2
CN602 18P B TO B
CONNECTOR
CN604 18P B TO B
1 GND (D), 2 5V, 3 GND (D), 4 PG, 5 H1, 6 LH1, 7 H2, 8 V2, 9 V SUB, 10 V3, 11 −9V, 12 PG CONT, 13 V1, 14 V SUB CONT, 15 V4, 16 V SUB CHECK, 17 15V, 18 5V (A)
W602 50P
50 FOCUS ANODE, 49 FOCUS F C, 48 FOCUS N C, 47 ZOOM W, 46 ZOOM T, 45 HALL (+), 44 HALL (−), 43 BIAS (+), 42 CONT (−), 41 CONT (+), 40 GND, 39 GND, 38 DRIVE (+), 37 FOCUS F, 36 FOCUS N, 35 V SUB CONT, 34 AGC REF, 33 N.C, 32 CL, 31 AGC CONT F, 30 WND, 29 DDS SI, 28 DDS SCK, 27 HD, 26 VD, 25 TG STB, 24 −9V, 23 15V, 22 5V, 21 GND, 20 GND, 19 PG CONT, 18 V SUB CHECK, 17 N.C, 16 XDL 1, 15 XDL 2, 14 GND, 13 ID, 12 SYNC, 11 BF, 10 LALT, 9 BLK, 8 CLP4, 7 CLP3, 6 CLP2, 5 Y, 4 S1, 3 S2, 2 CS OUT, 1 N.C
CN706 20P FPC ZIF
FOCUS ANODE 20, COCUS F C 19, FOCUS N C 18, ZOOM W 17, ZOOM T 16, HALL (+) 15, HALL (−) 14, BIAS (+) 13, CONT (−) 12, CONT (+) 11, GND 10, DRIVE (+) 9, FOCUS F 8, FOCUS N 7, V SUB CONT 6, AGC REF 5, N.C 4, CL 3, AGC CONT F 2, WND 1
CN705 28P FPC ZIF
DDS SI 28, DDS SCK 27, HD 26, VD 25, TG STB 24, −9V 23, 15V 22, 5V 21, GND 20, PG CONT 19, V SUB CHECK 18, N.C 17, XDL 1 16, XDL 2 15, GND 14, ID 13, SYNC 12, BF 11, LALT 10, BLK 9, CLP4 8, CLP3 7, CLP2 6, Y 5, S1 4, S2 3, CS OUT 2, N.C 1
W603
GND
CN707 11P FPC ZIF
GND 1, ↓, GND 11
J202 CHECK
CN171 2P 1.5JST I
1 PRE HEAT, 2 GND
J001 S OUT
J002 AUDIO OUT, RFU DC OUT, VIDEO OUT
CN102 6P JST I
CB A+ 1, CB R-Y 2, GND 3, CB A− 4, CB B-Y 5, GND 6
VJ-100
CN703 6P JST L RED
CB A+ 1, CB R-Y 2, GND 3, CB A− 4, CB B-Y 5, GND 6
CN101 11P JST I
6V 1, CMD 1 2, CMI 1 3, CMD 3 4, FOCUS A/M 5, FOCUS N 6, FOCUS F 7, ZOOM TELE 8, ZOOM WIDE 9, GND 10, C.B ON/OFF 11
VF-56
CN201 11P JST L
6V 1, CMD 1 2, CMI 1 3, CMD 3 4, FOCUS A/M 5, FOCUS N 6, FOCUS F 7, ZOOM TELE 8, ZOOM WIDE 9, GND 10, C.B ON/OFF 11
CN001 10P JST I
Y OUT 1, Y GND 2, C OUT 3, C GND 4, VIDEO OUT 5, VIDEO GND 6, RFU DC 7, RFU GND 8, MIC 6V 9, MIC GND 10
VP-55
CN208 10P JST L
Y OUT 1, Y GND 2, C OUT 3, C GND 4, VIDEO OUT 5, VIDEO GND 6, RFU DC 7, RFU DC GND 8, MIC 6V 9, MIC GND 10
CN003 3P JST I
MIC 6V 1, AUDIO OUT 2, MIC GND 3
CN701 5P JST L
CAM ON 1, CAM UNREG 2, UNREG GND 3, CAM 5V 4, CAM GND 5
DV-54
CN3 5P JST
CAM ON 1, CAM UNREG 2, UNREG GND 3, CAM 5V 4, CAM GND 5
CN702 4P JST L
15V 1, −9V 2, 5V 3, GND 4
DV-55
CN2 4P JST
15V 1, −9V 2, 5V 3, GND 4
CN204 3P JST L
CAM UNREG 1, GND 2, CAM ON 3
DV-56
CN1 2P JST
CAM UNREG 1, GND 2
CN203 2P 2.0 EL L
6V 1, 6V 2, GND 3
PV-108
CN3 3P 2.0 EL
6V 1, 6V 2, GND 3
CN1 2P 3.96 JST
AC IN
PA-104
CN209 5P JST I
N/P CONT 1, IRIS SW 2, IRIS SW 3, C.LEVEL CONT 4, IRIS CONT 5
CHECK CN902 4P SMK I RED
J STB 1, MOSI 2, SCK 3, GND 4
CHECK CPA001 22P
G OUT A1, PG CONT A2, N.C. A3, YO A4, Y1 A5, CO A6, C1 A7, CAM Y A8, YH A9, CAM C A10, N.C. A11, WB ADJ B1, N.C. B2, Y (LPF) OUT B3, V SUB B4, AW ADJ B5, CAM ADJ B6, MODE B7, ID B8, N.C. B9, GND B10, CCD OUT B11
CHECK
09

FRAME FRAME


8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
W602 50P
50 FOCUS ANODE
49 FOCUS F C
48 FOCUS N C
47 ZOOM W
46 ZOOM T
45 HALL (+)
44 HALL (-)
43 BIAS (+)
42 CONT (-)
41 CONT (+)
40 GND
39 GND
38 DRIVE (+)
37 FOCUS F
36 FOCUS N
35 V SUB CONT
34 AGC REF
33 N.C
32 CL
31 AGC CONT F
30 WND
29 DDS SI
28 DDS SCK
27 HD
26 VD
25 TG STB
24 -9V
23 15V
22 5V
21 GND
20 GND
19 PG CONT
18 V SUB CHECK
17 N.C
16 XOL 1
15 XOL 2
14 GND
13 ID
12 SYNC
11 BF
10 LALT
9 BLK
8 CLP4
7 CLP3
6 CLP2
5 Y
4 S1
3 S2
2 CS OUT
1 N.C
FP-378
CN706 20P FPC ZIF
CN705 28P FPC ZIF
VC-85
MX-7 (HIC)
W603
GND
FP-412
CN707 11P FPC ZIF
GND
↓
GND
JS-22
FA-1
PJ-43
MC-65
CN171 2P 1.5JST I
1 PRE HEAT
2 GND
S OUT
J001
J002
AUDIO OUT
RFU DC OUT
VIDEO OUT
FF-165
J003 MIC
CN102 6P JST I
CB 4+
CB R-Y
GND
CB 4-
CB B-Y
GND
VJ-100
CN703 6P JST L RED
CN101 11P JST I
6V
CMD 1
CMI 1
CMD 3
FOCUS Ā/M
FOCUS N
FOCUS F
ZOOM TELE
ZOOM WIDE
GND
C.B ON/OFF
VF-56
CN201 11P JST L
CN001 10P JST I
Y OUT
Y GND
C OUT
C GND
VIDEO OUT
VIDEO GND
RFU DC
RFU DC GND
MIC 6V
MIC GND
VP-55
CN208 10P JST L
CN003 3P JST I
MIC 6V
AUDIO OUT
MIC GND
CN004 3P JST I
PM-58
CN701 5P JST L
CAM ON
CAM UNREG
UNREG GND
CAM 5V
CAM GND
DV-54
CN3 5P JST
CN702 4P JST L
15V
-9V
5V
GND
DV-55
CN2 4P JST
CN204 3P JST L
CAM UNREG
GND
CAM ON
DV-56
CN1 2P JST
DC-DC CONVERTER
CN203 2P 2.0 EL L
6V
6V
GND
PV-108
CN3 3P 2.0 EL
CN2 4P 2.0 EL
12V
12V
GND
GND
P1-52
CN1 3P 2.0 EL
12V
N.C.
GND
CN172 2P 1.5JST L
PRE HEAT
GND
POWER BLOCK
INV
FR-62
CN1 2P 3.96 JST
AC IN
AC IN
CN062 3P 2.0 EL I
+B
N.C.
GND
PA-104
POWER SW
AC IN
J202
CHECK
CN209 5P JST I
N/P CONT
IRIS SW
IRIS SW
C.LEVEL CONT
IRIS CONT
CHECK CN902 4P SMK I RED
J STB
MOSI
SCK
GND
CHECK CPA001 22P
A1 G OUT
A2 PG CONT
A3 N.C.
A4 YD
A5 Y1
A6 CD
A7 C1
A8 CAM Y
A9 YH
A10 CAM C
A11 N.C.
B1 WB ADJ
B2 N.C.
B3 Y (LPF) OUT
B4 V SUB
B5 AW ADJ
B6 CAM ADJ
B7 MODE
B8 ID
B9 N.C.
B10 GND
B11 CCD OUT
CHECK
AME
FRAME
FRAME

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.

(In addition to this , the necessary note is printed in each block.)

- **For printed wiring boards.**
- ○— : indicated a lead wire mounted on the component side.
- ⊗ : Through hole.
- ■ : Parts mounted on the conductor side.
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.
- Circled numbers refer to waveforms.

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component side)	Parts on the parts face side seen from the pattern face are indicated.

- **For schematic diagrams.**
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minuts side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/6W unless otherwise noted.
  Chip resistor are 1/16W unless otherwise noted.
  kΩ : 1000Ω , MΩ : 1000kΩ .
- All capacitors are in μF unless otherwise noted. pF: μμF.
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- ▭ : panel designation.
- ▭ : adjustment for repeair.
- ━ : B+ Line.
- - - - : B– Line.
- ⇨ : IN/OUT direction of (+, –) B LINE.
- Circled numbers refer to waveforms.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safty. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- **Measuring conditions voltage value and waveform.**
- The object is color bar chart of pattern box.
- Voltages are dc between ground and measurement points. Readings are taken with a digital multimeter (DC 10MΩ).
- Voltage variations may be noted due to normal production tolerances.

1. Adjust the distance so that the output waveform of Fig. a and the Fig. b can be obtain.

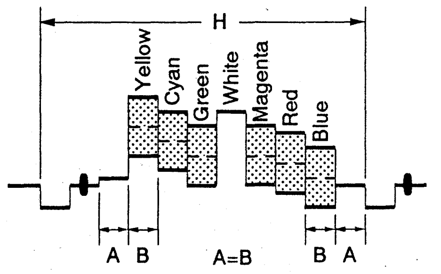

H
Yellow
Cyan
Green
White
Magenta
Red
Blue
A B
A=B
B A

Fig. a (Video output terminal output waveform

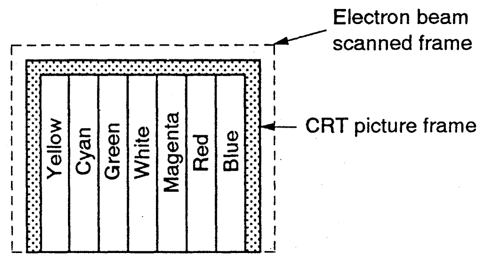
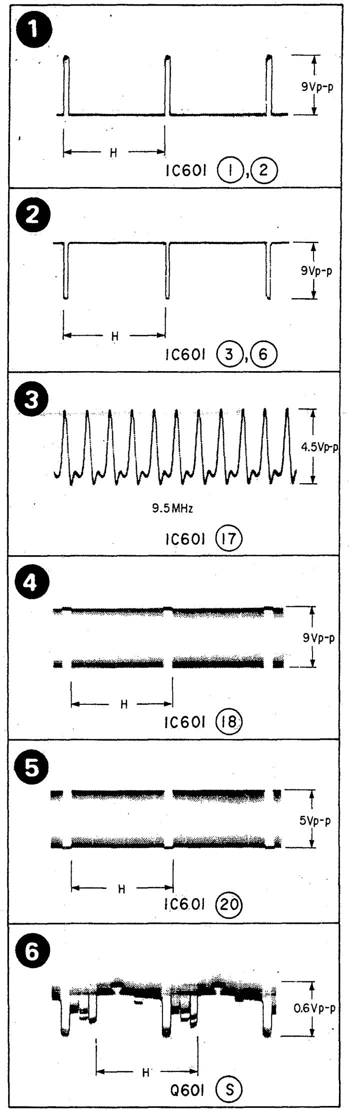
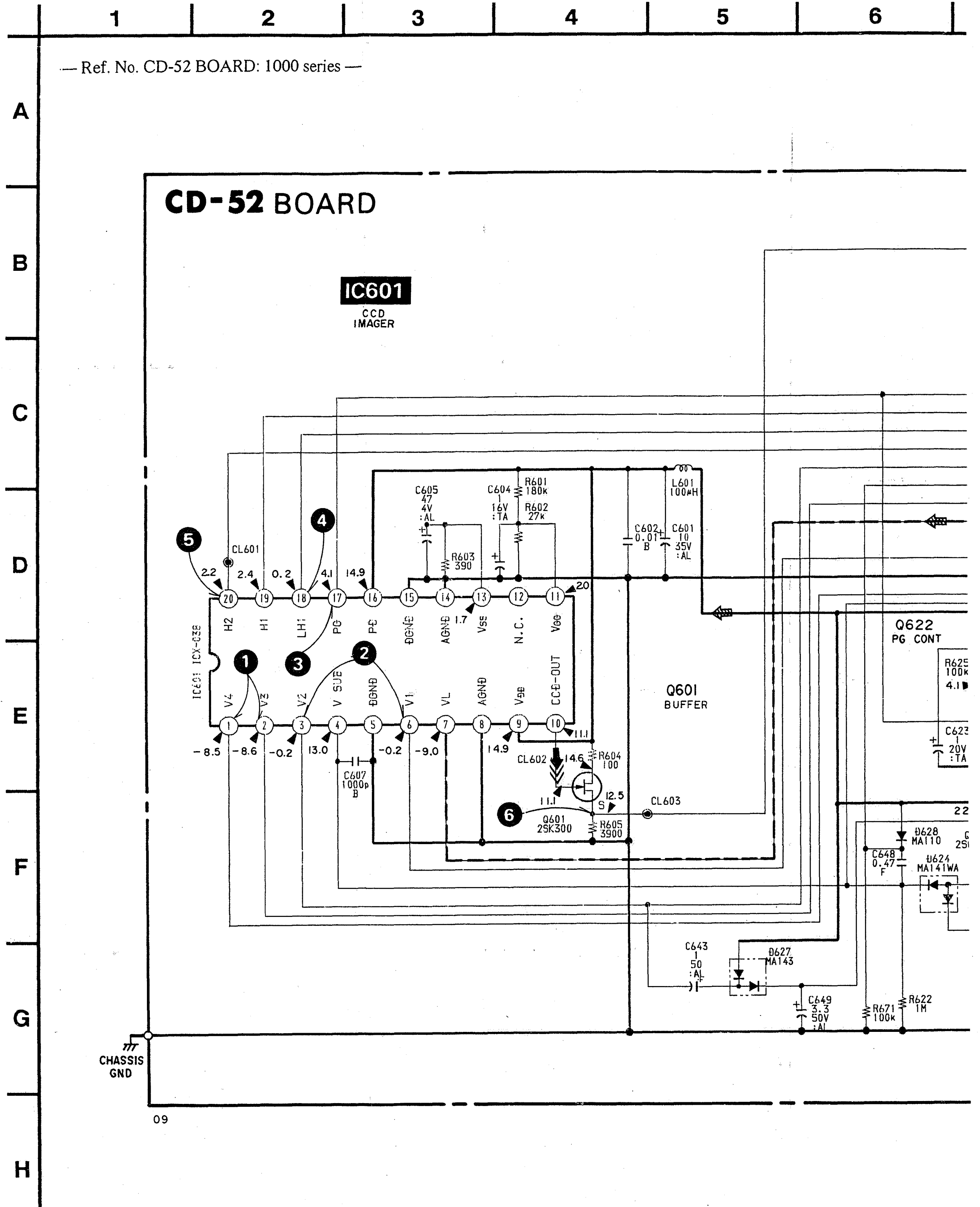

Electron beam scanned frame
CRT picture frame
Yellow
Cyan
Green
White
Magenta
Red
Blue

Fig. (Picture on monitor TV)

CD-52 BOARD



CD-52 (CCD IMAGER) SCHEMATIC DIAGRAM


1
2
3
4
5
6
A
B
C
D
E
F
G
— Ref. No. CD-52 BOARD: 1000 series —
CD-52 BOARD
IC601
CCD IMAGER
IC601 ICX-038
H2
H1
LH1
PG
PΦ
ΦGND
AGND
Vss
N.C.
VGG
V4
V3
V2
V SUB
ΦGND
V1
VL
AGND
VDD
CCD-OUT
2.2
2.4
0.2
4.1
14.9
1.7
20
-8.5
-8.6
-0.2
13.0
-0.2
-9.0
14.9
11.1
CL601
CL602
CL603
C605 47 4V :AL
C604 1 16V :TA
R601 180k
R602 27k
R603 390
C602 0.01 B
C601 10 35V :AL
L601 100μH
C607 1000p B
R604 100
R605 3900
14.6
12.5
S
Q601 2SK300
Q601 BUFFER
Q622 PG CONT
R625 100k
4.1
C623 1 20V :TA
22
D628 MA110
C648 0.47 F
D624 MA141WA
C643 1 50 :AL
D627 MA143
C649 3.3 50V :AL
R671 100k
R622 1M
CHASSIS GND
09

H

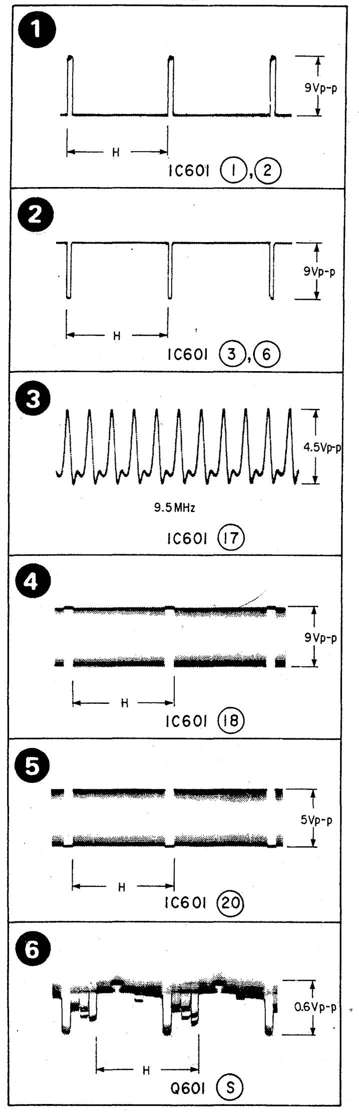
I

J

- **SIGNAL PAT**

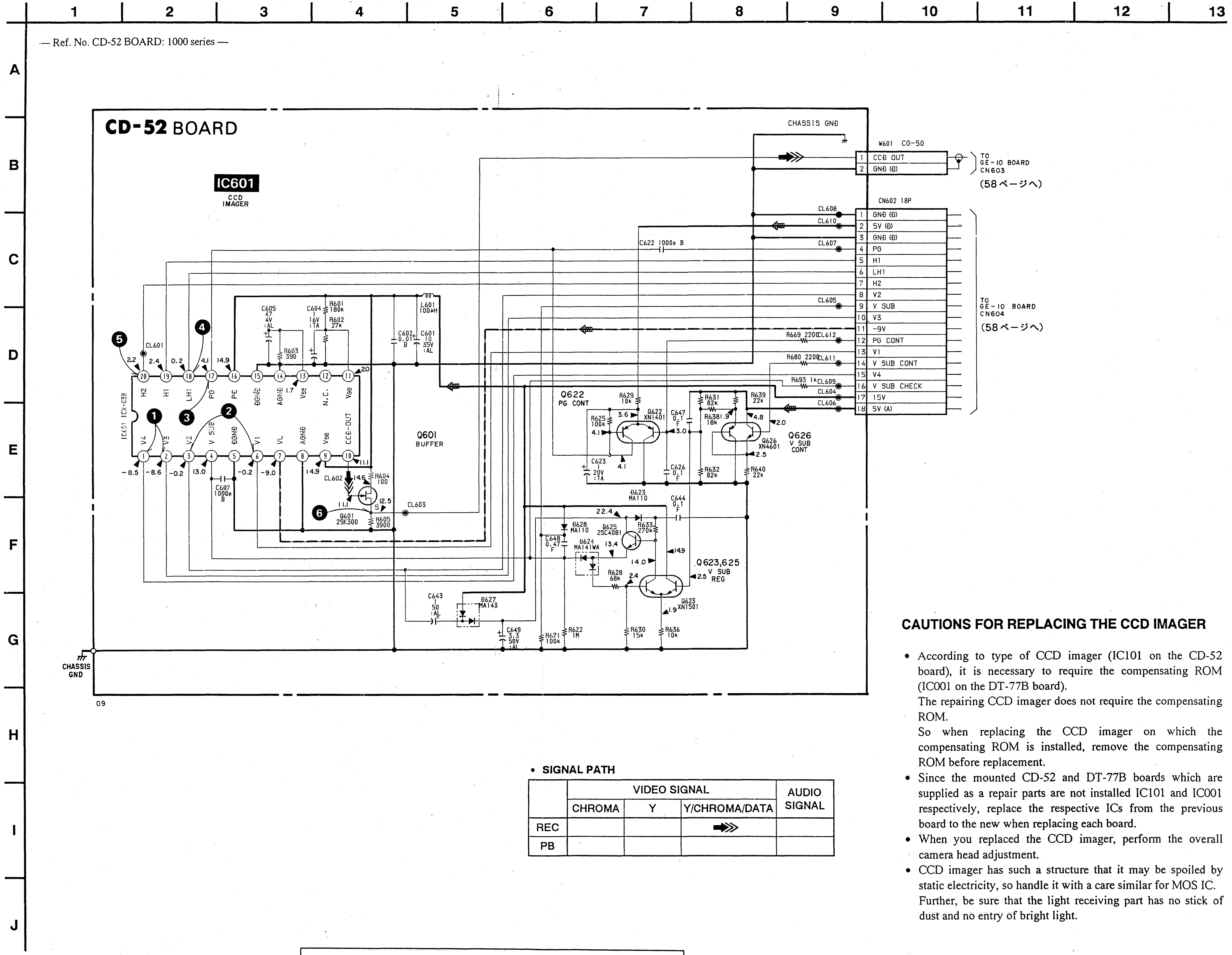
	CHROI
REC	
PB	

CD-52 BOARD



CD-52 (CCD IMAGER) SCHEMATIC DIAGRAM

— Ref. No. CD-52 BOARD: 1000 series —


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
J
CD-52 BOARD
IC601
CCD IMAGER
CHASSIS GND
W601 CG-50
1 CCD OUT
2 GND (D)
TO GE-10 BOARD CN603
(58ページへ)
CN602 18P
1 GND (D)
2 5V (D)
3 GND (D)
4 PG
5 H1
6 LH1
7 H2
8 V2
9 V SUB
10 V3
11 -9V
12 PG CONT
13 V1
14 V SUB CONT
15 V4
16 V SUB CHECK
17 15V
18 5V (A)
TO GE-10 BOARD CN604
(58ページへ)
CL608
CL610
CL607
CL605
R669 220Ω CL612
R680 220Ω CL611
R693 1k CL609
CL604
CL606
C622 1000p B
H2
H1
LH1
PG
PE
DGND
AGND
Vss
N.C.
Vdd
V4
V3
V2
V SUB
DGND
V1
VL
AGND
Vgg
CCD-OUT
C605 47 4V :AL
C604 1 16V :TA
R601 180k
R602 27k
R603 390
L601 100μH
C602 0.01 B
C601 10 35V :AL
C607 1000p B
R604 100
R605 3900
Q601 2SK300
Q601 BUFFER
CL601
CL602
CL603
Q622 PG CONT
R625 100k
R629 10k
Q622 XN1401
C647 0.1 F
C623 1 20V :TA
C626 0.1 F
R631 82k
R638 18k
R639 22k
R632 82k
R640 22k
Q626 XN4601
Q626 V SUB CONT
D623 MA110
C644 0.1 F
D628 MA110
Q625 2SC4081
R633 270k
C648 0.47 F
D624 MA141WA
R628 68k
Q623,625 V SUB REG
Q623 XN1501
C643 50 :AL
D627 MA143
C649 3.3 50V :AL
R671 100k
R622 1M
R630 15k
R636 10k
09
-8.5
-8.6
-0.2
13.0
-0.2
-9.0
14.9
2.2
2.4
0.2
4.1
14.9
1.7
2.0
14.6
11.1
12.5
3.6
4.1
3.0
4.8
2.0
2.5
22.4
13.4
14.0
14.9
2.4
2.5
1.9

- **SIGNAL PATH**

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA/DATA	
REC			➡≫	
PB				

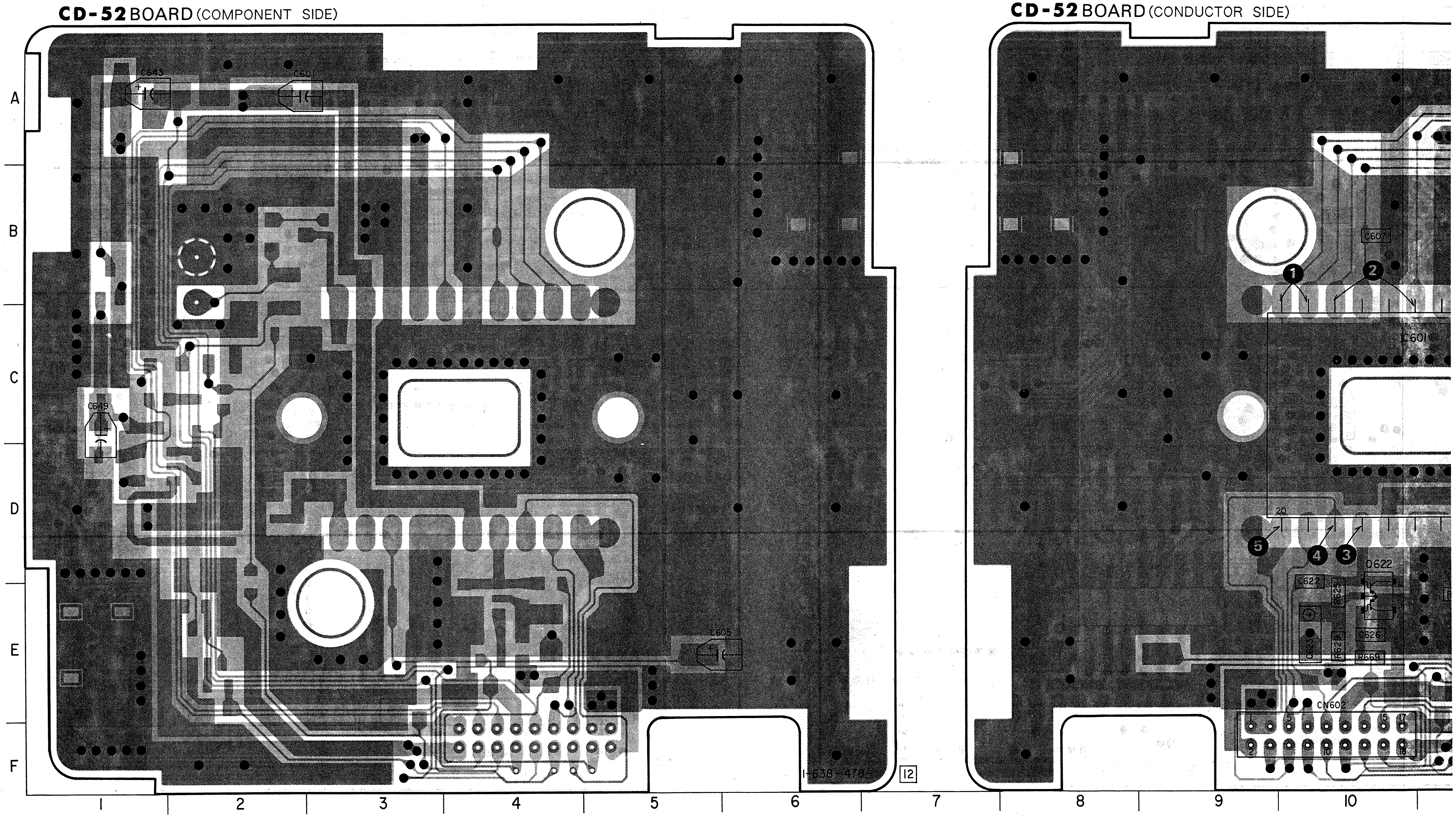
CAUTIONS FOR REPLACING THE CCD IMAGER

- According to type of CCD imager (IC101 on the CD-52 board), it is necessary to require the compensating ROM (IC001 on the DT-77B board).
  The repairing CCD imager does not require the compensating ROM.
  So when replacing the CCD imager on which the compensating ROM is installed, remove the compensating ROM before replacement.
- Since the mounted CD-52 and DT-77B boards which are supplied as a repair parts are not installed IC101 and IC001 respectively, replace the respective ICs from the previous board to the new when replacing each board.
- When you replaced the CCD imager, perform the overall camera head adjustment.
- CCD imager has such a structure that it may be spoiled by static electricity, so handle it with a care similar for MOS IC.
  Further, be sure that the light receiving part has no stick of dust and no entry of bright light.

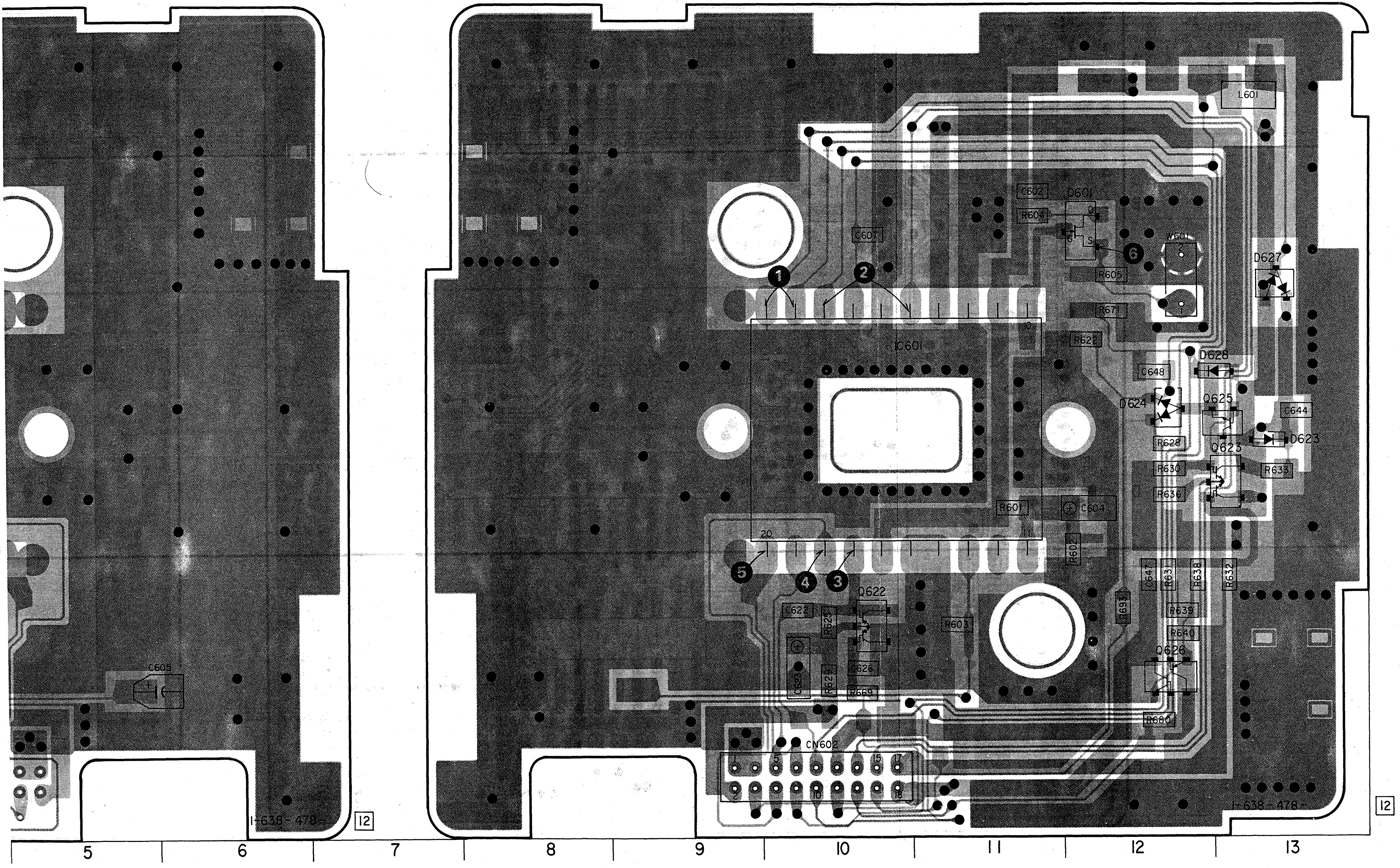
CD-52 (CCD IMAGER) PRINTED WIRING BOARD

— Ref. No. CD-52 BOARD: 1000 series —

CD-52	BOARD
D623	C-13
D624	C-12
D627	B-13
D628	C-13
Q601	B-12
Q622	E-10
Q623	D-13
Q625	C-13
Q626	E-12


CD-52 BOARD (COMPONENT SIDE)
CD-52 BOARD (CONDUCTOR SIDE)
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10
C643
C601
C649
C605
1-638-478-
12
C607
C601
❶
❷
❸
❹
❺
20
D622
C622
R624
C626
R669
CN602
1
5
15
17
2
10
18

CD-52 BOARD (CONDUCTOR SIDE)



IC601
Q601
Q622
Q623
Q625
Q626
D623
D624
D627
D628
L601
W601
C602
C604
C605
C607
C622
C626
C644
C648
C641
R601
R602
R603
R604
R605
R621
R622
R623
R624
R625
R628
R630
R631
R632
R633
R636
R638
R639
R640
R669
R680
R691
CN602
1-638-478-
12
5
6
7
8
9
10
11
12
13

* A-7062-659-A CD-52 BOARD, COMPLETE
****
(Ref.No 1,000 Series)

< DIODE >

D623	8-719-404-46	DIODE MA110
D624	8-719-404-32	DIODE MA141WA
D627	8-719-404-52	DIODE MA143
D628	8-719-404-46	DIODE MA110

< TRANSISTOR >

Q601	8-765-420-02	TRANSISTOR 2SK300-3
Q622	8-729-403-42	TRANSISTOR XN1401
Q623	8-729-421-23	TRANSISTOR XN1216
Q625	8-729-905-35	TRANSISTOR 2SC4081-R
Q626	8-729-402-84	TRANSISTOR XN4601

* A-7062-660-A GE-10 BOARD, COMPLETE
****
(Ref. No 4,000 Series)

< DIODE >

D621	8-719-404-46	DIODE	MA110
D622	8-719-404-46	DIODE	MA110
D631	8-719-404-46	DIODE	MA110

< IC >

IC621	8-752-326-08	IC	CXD1159Q-T3

< TRANSISTOR >

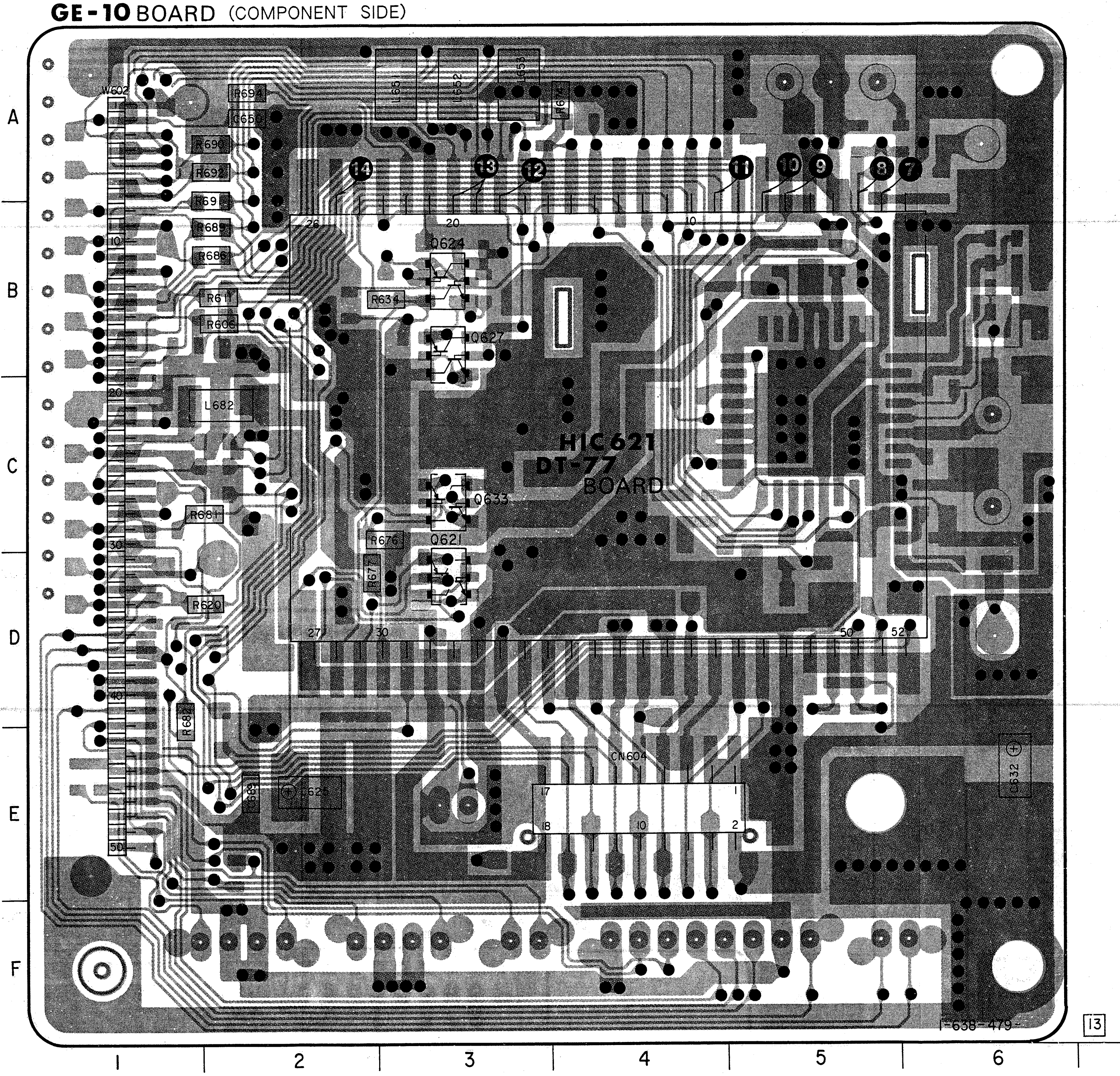
Q621	8-729-402-84	TRANSISTOR	XN4601
Q624	8-729-402-84	TRANSISTOR	XN4601
Q627	8-729-402-84	TRANSISTOR	XN4601
Q628	8-729-905-35	TRANSISTOR	2SC4081-R
Q633	8-729-402-84	TRANSISTOR	XN4601

GE-10 (SYNC/TIMING GENERATOR) PRINTED WIRING BOARD

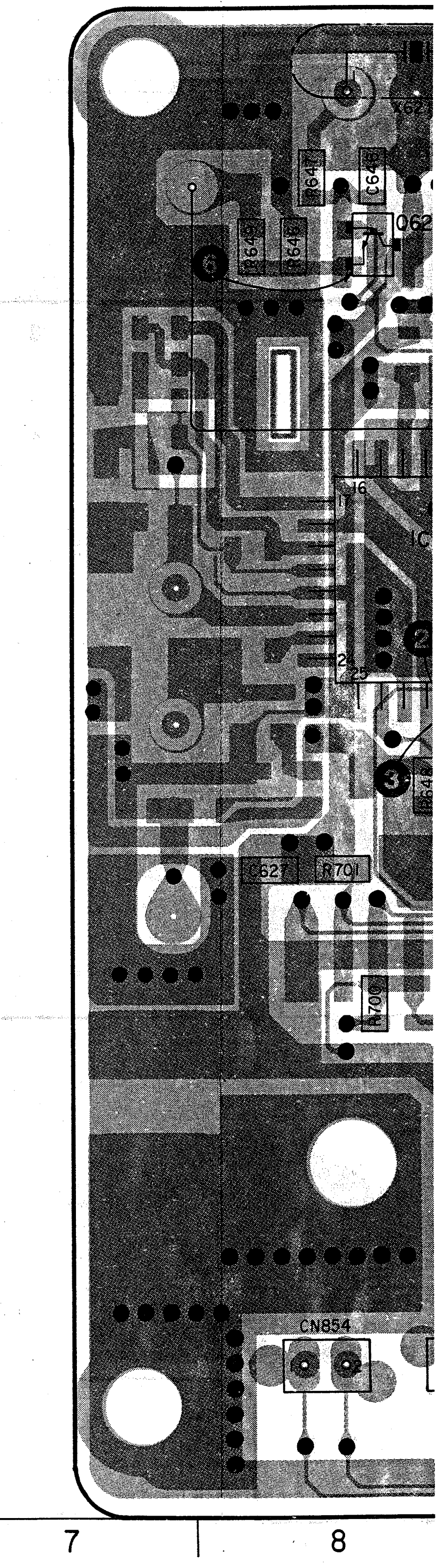
— Ref. No. GE-10 BOARD: 4000 series —

GE-10	BOARD
D621	D-12
D622	D-12
IC621	C-8
Q621	D-3
Q624	B-3
Q627	B-3
Q628	A-8
Q633	C-3

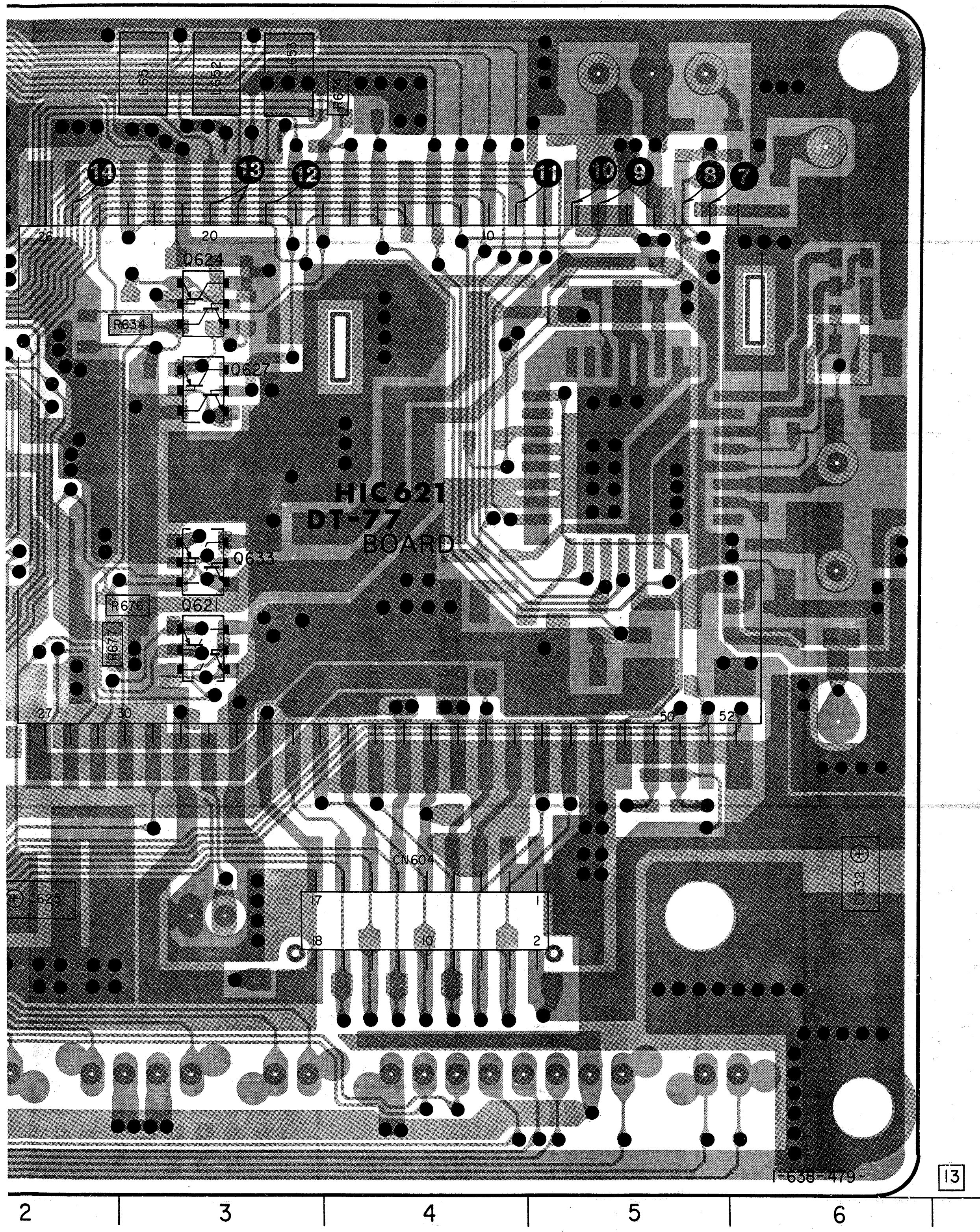
GE-10 BOARD (COMPONENT SIDE)


A
B
C
D
E
F
1
2
3
4
5
6
W602
R694
L651
L652
L653
L654
R690
R692
R691
R689
R686
R611
R606
R634
Q624
Q627
L682
HIC621
DT-77
BOARD
Q633
R681
R676
Q621
R677
R620
R682
R683
C625
CN604
C632
14
13
12
11
10
9
8
7
1
10
20
26
27
30
40
50
52
17
18
2
1-638-479-
13

GE-10 BOARD (CO


7
8
6
Q62
C627
R701
R700
CN854
2
3

PONENT SIDE)


L651
L652
L653
R614
14
13
12
11
10
9
8
7
26
20
10
Q624
R634
Q627
HIC621
DT-77
BOARD
Q633
Q621
R676
R677
27
30
50
52
CN604
17
1
18
10
2
C620
C632
1-638-479-
13
2
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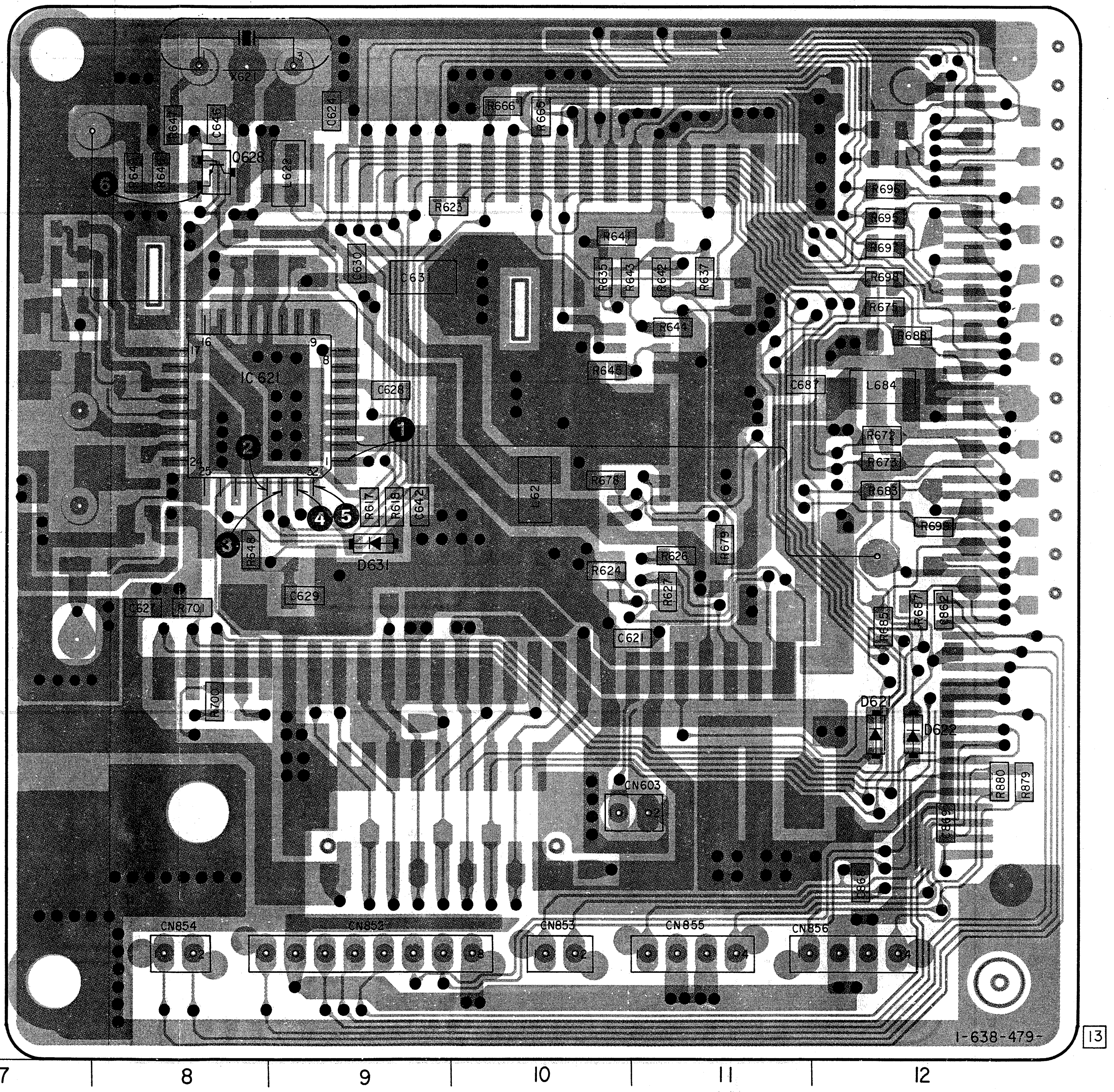
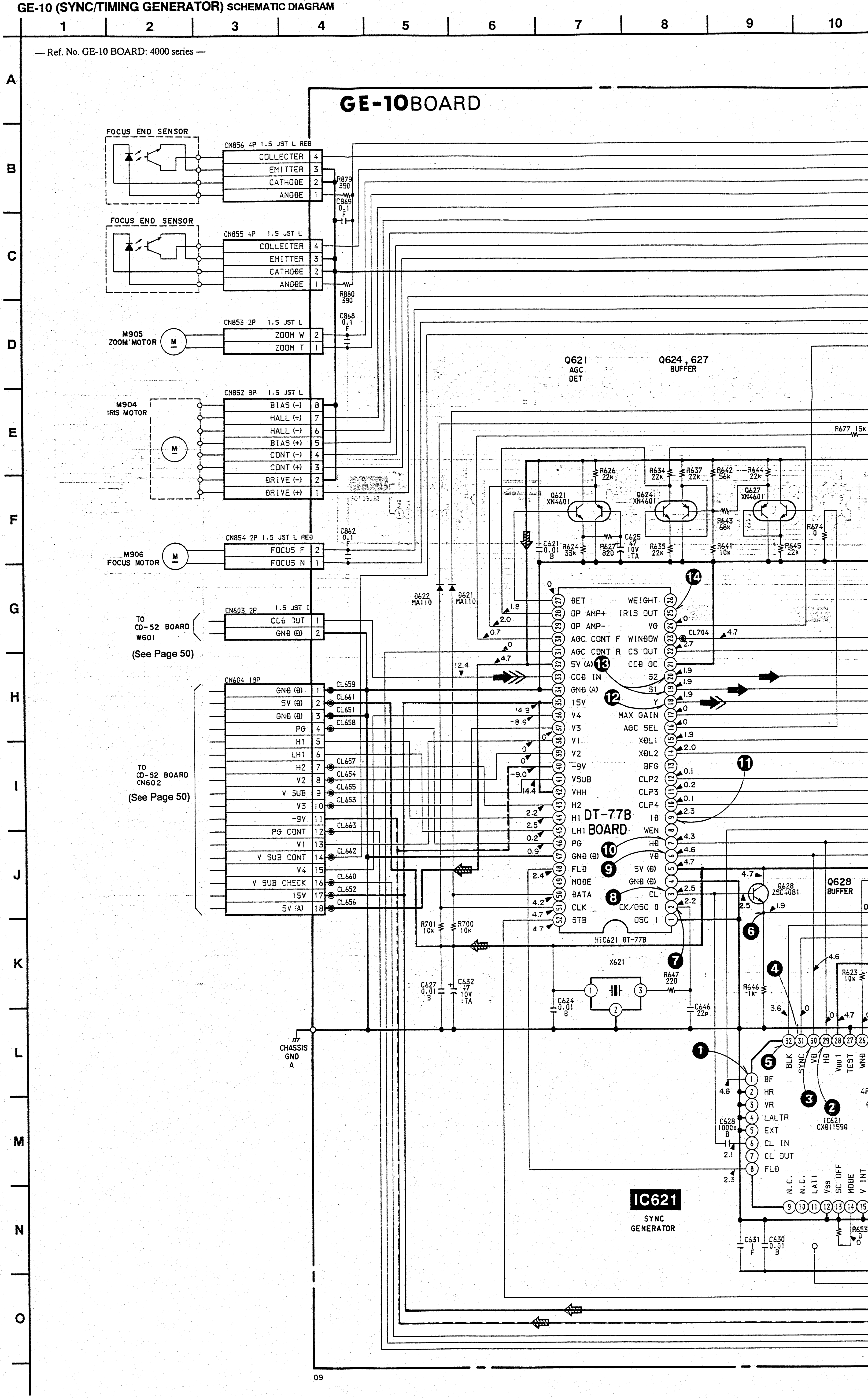
4
5
6
7

GE-10 BOARD (CONDUCTOR SIDE)


X621
C624
C645
C647
Q628
R649
R648
6
C623
R666
R665
R623
C630
C631
R647
R635
R643
R642
R637
R644
R645
IC621
16
17
9
8
C626
1
2
24
25
32
R617
R618
C642
3
4
5
R640
D631
C629
C627
R701
C621
R624
R626
R627
R679
R676
C622
C687
L684
R696
R693
R697
R698
R675
R688
R673
R672
R683
R695
R685
R687
R662
D621
D622
R880
R879
R689
R700
CN603
R681
CN854
CN852
CN853
CN855
CN856
1-638-479-
13
8
9
10
11
12

GE-10 (SYNC/TIMING GENERATOR) SCHEMATIC DIAGRAM

— Ref. No. GE-10 BOARD: 4000 series —



1
2
3
4
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7
8
9
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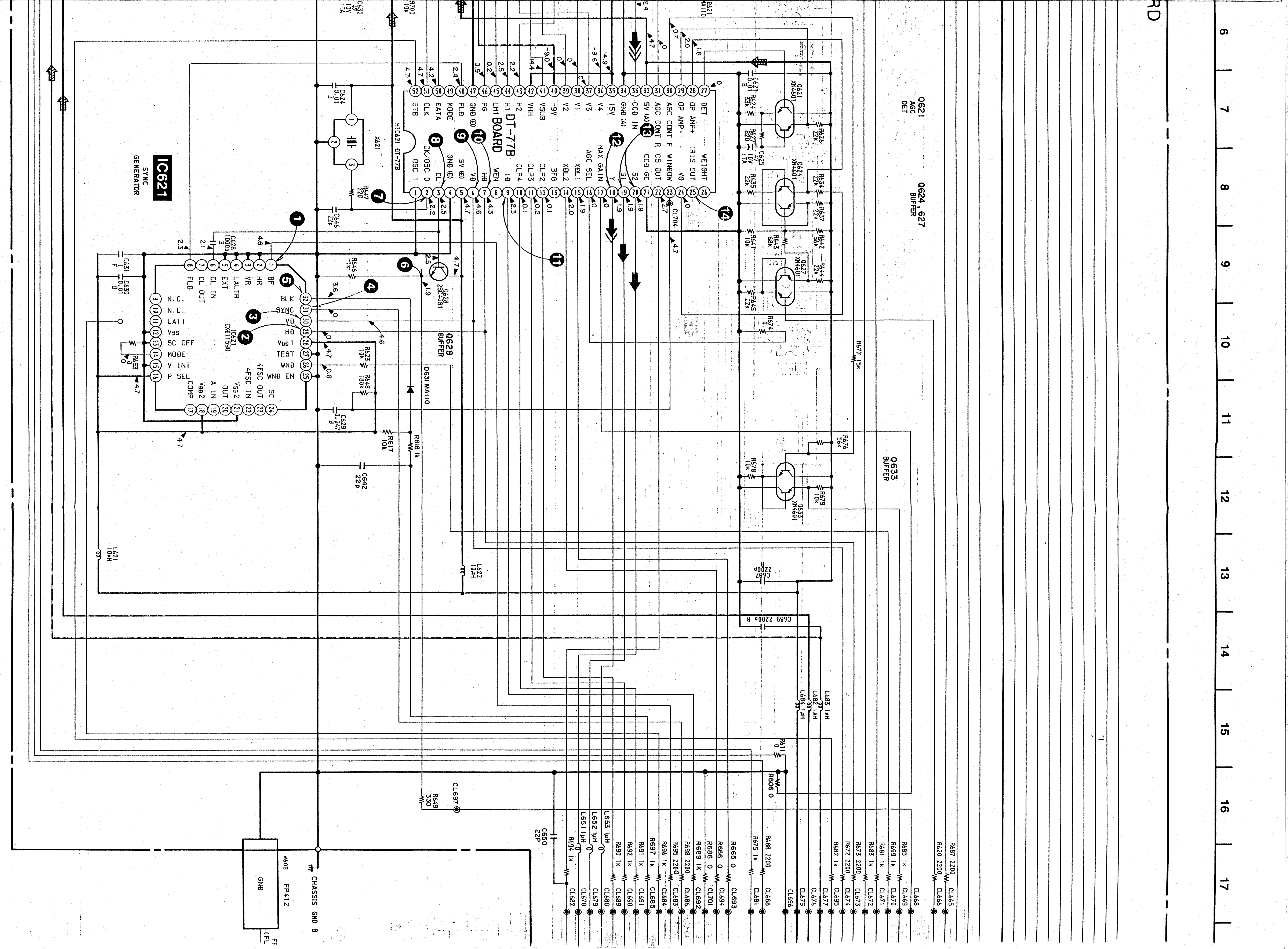
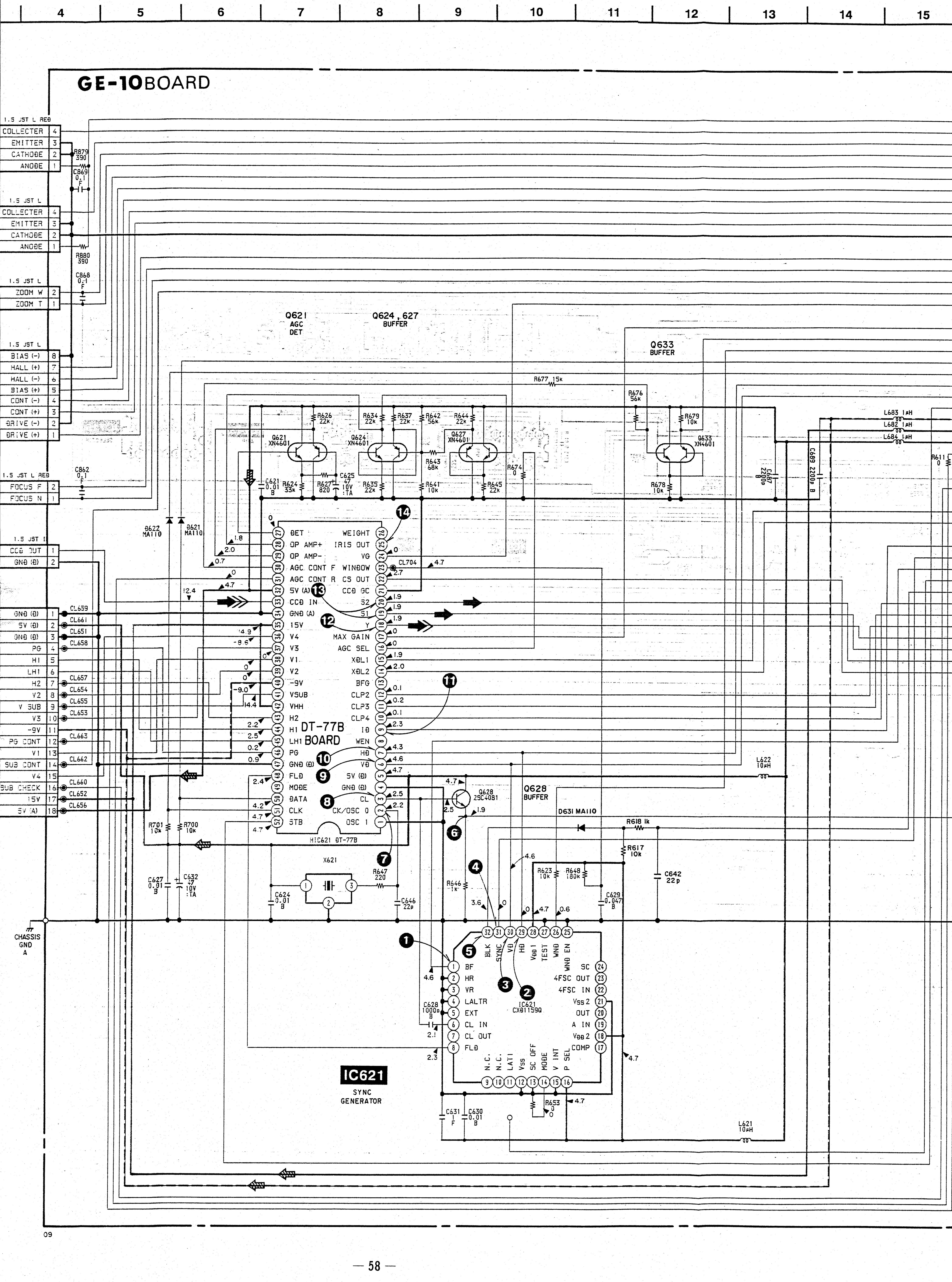
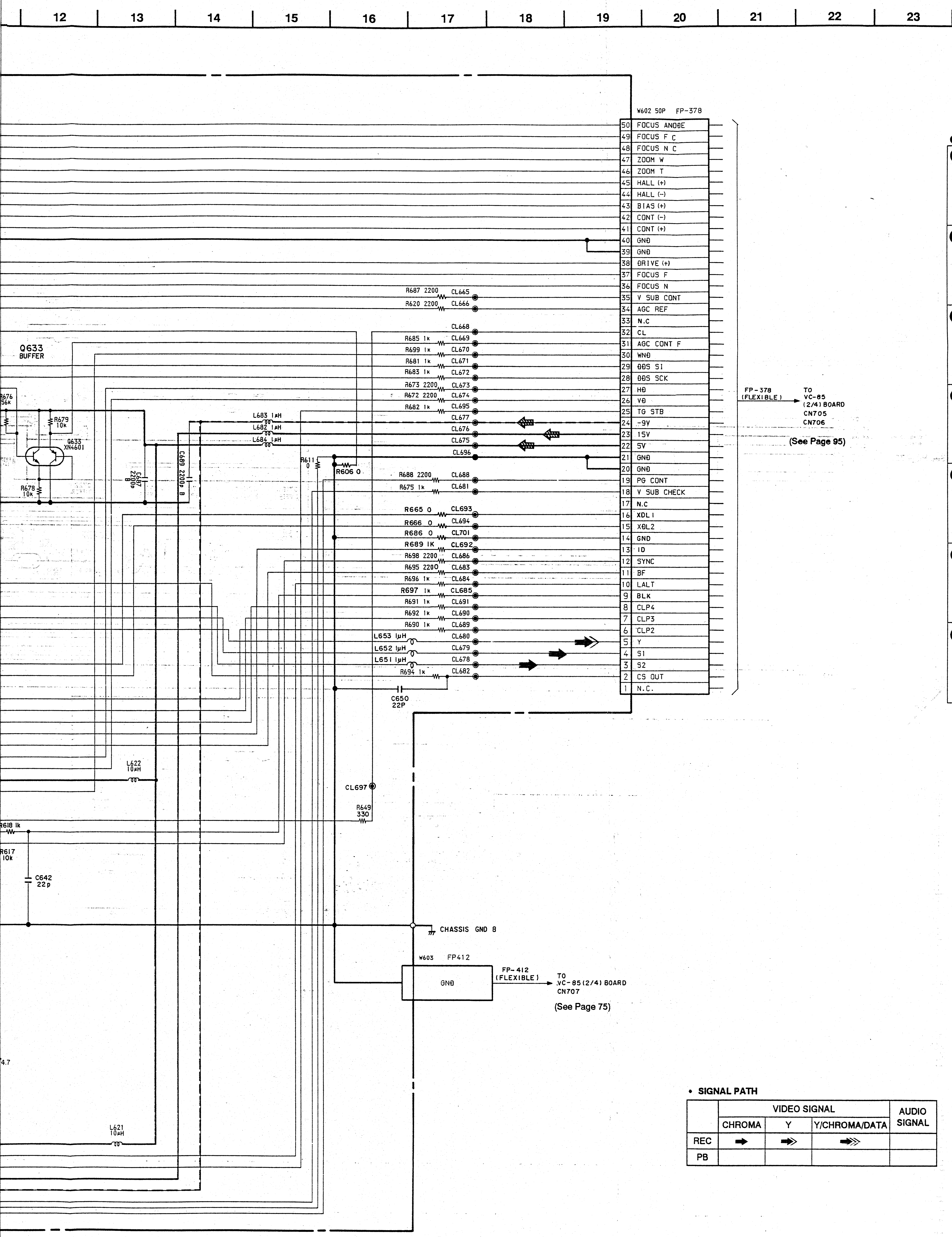
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
GE-10BOARD
FOCUS END SENSOR
CN856 4P 1.5 JST L REB
COLLECTER
EMITTER
CATHODE
ANODE
R879 390
C869 0.1 F
FOCUS END SENSOR
CN855 4P 1.5 JST L
R880 390
C868 0.1 F
M905 ZOOM MOTOR
CN853 2P 1.5 JST L
ZOOM W
ZOOM T
M904 IRIS MOTOR
CN852 8P 1.5 JST L
BIAS (-)
HALL (+)
HALL (-)
BIAS (+)
CONT (-)
CONT (+)
DRIVE (-)
DRIVE (+)
M906 FOCUS MOTOR
CN854 2P 1.5 JST L REB
FOCUS F
FOCUS N
C862 0.1 F
TO CD-52 BOARD W601
(See Page 50)
CN603 2P 1.5 JST L
CCD OUT
GND (D)
TO CD-52 BOARD CN602
(See Page 50)
CN604 18P
GND (D)
5V (D)
GND (D)
PG
H1
LH1
H2
V2
V SUB
V3
-9V
PG CONT
V1
V SUB CONT
V4
V SUB CHECK
15V
5V (A)
CL659
CL661
CL651
CL658
CL657
CL654
CL655
CL653
CL663
CL662
CL660
CL652
CL656
Q622 MA110
Q621 MA110
Q621 AGC DET
Q624, 627 BUFFER
Q621 XN4601
Q624 XN4601
Q627 XN4601
R626 22k
R634 22k
R637 22k
R642 56k
R644 22k
R643 68k
R674 0
R677 15k
C621 0.01 B
R624 33k
R627 820
C625 47 10V :TA
R635 22k
R641 10k
R645 22k
DT-77B BOARD
DET
OP AMP+
OP AMP-
AGC CONT F
AGC CONT R
5V (A)
CCD IN
GND (A)
15V
V4
V3
V1
V2
-9V
VSUB
VHH
H2
H1
LH1
PG
GND (D)
FLD
MODE
DATA
CLK
STB
WEIGHT
IRIS OUT
VG
WINDOW
CS OUT
CCD GC
S2
S1
Y
MAX GAIN
AGC SEL
XDL1
XDL2
BFG
CLP2
CLP3
CLP4
ID
WEN
HD
VD
5V (D)
GND (D)
CL
CK/OSC 0
OSC 1
HIC621 DT-77B
CL704
R701 10k
R700 10k
C627 0.01 B
C632 47 10V :TA
X621
C624 0.01 B
R647 220
C646 22p
Q628 2SC4081
Q628 BUFFER
R646 1k
R623 10k
CHASSIS GND A
BF
HR
VR
LALTR
EXT
CL IN
CL OUT
FLD
N.C.
N.C.
LATI
Vss
SC OFF
MODE
V INT
BLK
SYNC
VD
HD
VDD1
TEST
WND
IC621 CX811590
C628 1000p B
C631 1 F
C630 0.01 B
R653 0
IC621
SYNC GENERATOR
09

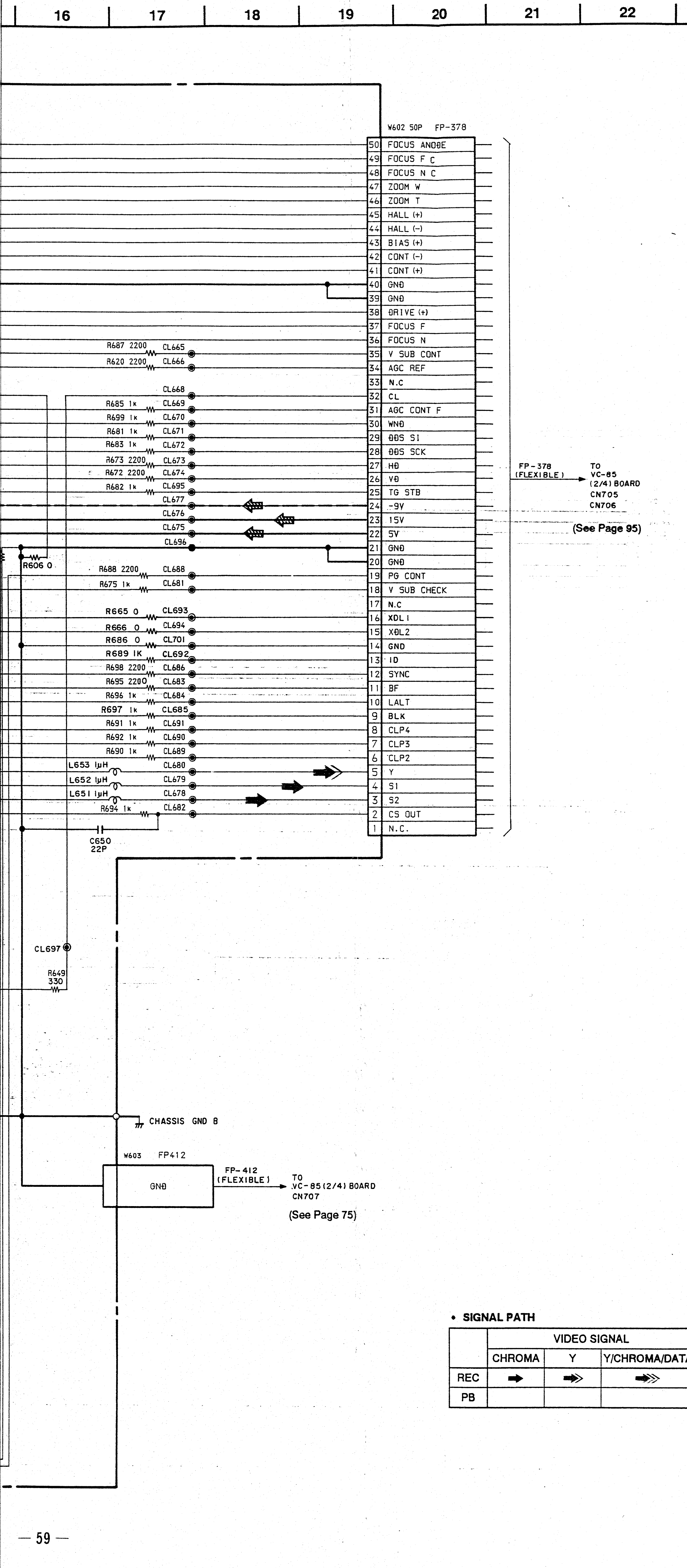

IC621
SYNC GENERATOR
IC621 CXD1159Q
DT-77B BOARD
IC621 DT-77B
STB
CLK
DATA
MODE
FLD
GND (D)
PG
LH1
H1
H2
VHH
VSUB
-9V
V2
V1
V3
V4
15V
GND (A)
CCD IN
5V (A)
AGC CONT R
OP AMP-
OP AMP+
DET
WEIGHT
IRIS OUT
VG
WINDOW
AGC CONT F
CS OUT
CCD GC
S2
S1
Y
MAX GAIN
AGC SEL
XDL1
XDL2
BFG
CLP2
CLP3
CLP4
ID
WEN
HD
VD
5V (D)
GND (D)
CL
CK/DSC 0
DSC 1
BF
HR
VR
LALTR
EXT
CL IN
CL OUT
FLD
N.C.
N.C.
LATI
Vss
SC OFF
MODE
V INT
P SEL
COMP
VDD 2
A IN
OUT
Vss 2
4FSC IN
4FSC OUT
SC
WND EN
WND
TEST
VDD 1
HD
VD
SYNC
BLK
Q621
AGC DET
Q621 XN4601
Q624,627
BUFFER
Q624 XN4601
Q627 XN4601
Q633
BUFFER
Q633 XN4601
Q628
BUFFER
Q628 2SC4081
D631 MA110
X621
C621 0.01 B
C624 0.01 B
C625 47 10V :TA
C628 1000p B
C629 0.047 B
C630 0.01 B
C631 1 F
C632 47 10V :TA
C642 22P
C646 22P
C650 22P
C607 2200p B
C689 2200p B
R624 33k
R626 22k
R627 820
R634 22k
R635 22k
R637 22k
R641 10k
R642 56k
R643 68k
R644 22k
R645 22k
R646 1k
R647 220
R648 180k
R649 330
R653 0
R606 0
R611 0
R617 10k
R618 1k
R623 10k
R674 0
R676 56k
R677 15k
R678 10k
R679 10k
R700 10k
L621 10µH
L622 10µH
L682 1µH
L683 1µH
L684 1µH
L651 1µH
L652 1µH
L653 1µH
CL697
CL704
R694 1k
R690 1k
R692 1k
R691 1k
R697 1k
R696 1k
R695 2200
R698 2200
R689 1k
R686 0
R666 0
R665 0
R675 1k
R688 2200
R682 1k
R672 2200
R673 2200
R683 1k
R681 1k
R699 1k
R685 1k
R620 2200
R687 2200
CL682
CL678
CL679
CL680
CL689
CL690
CL691
CL685
CL684
CL683
CL686
CL692
CL701
CL694
CL693
CL681
CL688
CL696
CL675
CL676
CL677
CL695
CL674
CL673
CL672
CL671
CL670
CL669
CL668
CL666
CL665
W603
GND
FP412
CHASSIS GND B
Q621 MA110
RD
6
7
8
9
10
11
12
13
14
15
16
17
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭

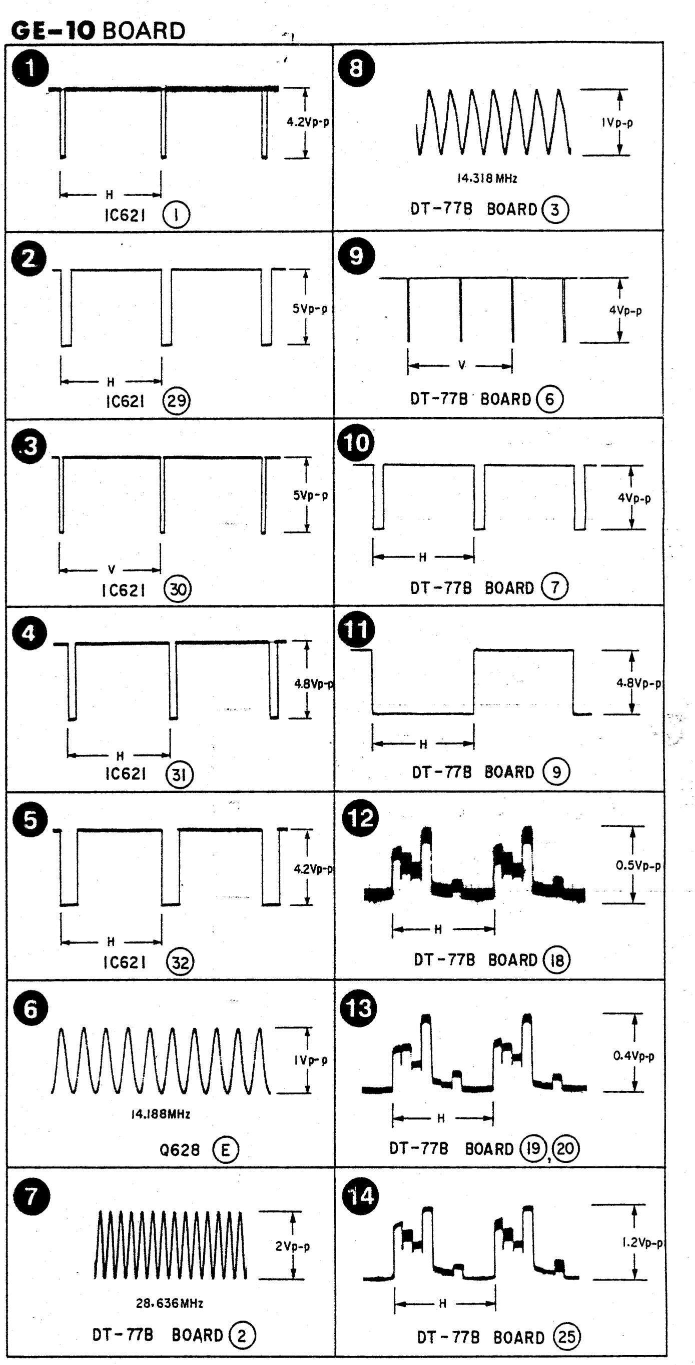

4
5
6
7
8
9
10
11
12
13
14
15
GE-10BOARD
1.5 JST L RED
COLLECTER 4
EMITTER 3
CATHODE 2
ANODE 1
R879 390
C869 0.1 F
1.5 JST L
COLLECTER 4
EMITTER 3
CATHODE 2
ANODE 1
R880 390
C868 0.1 F
1.5 JST L
ZOOM W 2
ZOOM T 1
1.5 JST L
BIAS (-) 8
HALL (+) 7
HALL (-) 6
BIAS (+) 5
CONT (-) 4
CONT (+) 3
DRIVE (-) 2
DRIVE (+) 1
1.5 JST L RED
FOCUS F 2
FOCUS N 1
C862 0.1 F
1.5 JST I
CCD OUT 1
GND (D) 2
GND (D) 1
5V (D) 2
GND (D) 3
PG 4
H1 5
LH1 6
H2 7
V2 8
V SUB 9
V3 10
-9V 11
PG CONT 12
V1 13
SUB CONT 14
V4 15
SUB CHECK 16
15V 17
5V (A) 18
CL659
CL661
CL651
CL658
CL657
CL654
CL655
CL653
CL663
CL662
CL660
CL652
CL656
Q621 AGC DET
Q624, 627 BUFFER
Q633 BUFFER
R677 15k
R676 56k
R679 10k
R626 22k
R634 22k
R637 22k
R642 56k
R644 22k
Q621 XN4601
Q624 XN4601
Q627 XN4601
Q633 XN4601
R643 68k
R674 0
C621 0.01 B
R624 33k
R627 820
C625 47 10V :TA
R635 22k
R641 10k
R645 22k
R678 10k
C687 2200p B
C689 2200p B
L683 1μH
L682 1μH
L684 1μH
R611 0
D622 MA110
D621 MA110
DET
OP AMP+
OP AMP-
AGC CONT F
AGC CONT R
5V (A)
CCD IN
GND (A)
15V
V4
V3
V1
V2
-9V
VSUB
VHH
H2
H1
LH1
PG
GND (D)
FLD
MODE
DATA
CLK
STB
WEIGHT
IRIS OUT
VG
WINDOW
CS OUT
CCD GC
S2
S1
Y
MAX GAIN
AGC SEL
XDL1
XDL2
BFG
CLP2
CLP3
CLP4
ID
WEN
HD
VD
5V (D)
GND (D)
CL
CK/OSC 0
OSC 1
DT-77B BOARD
HIC621 DT-77B
CL704
1.8
2.0
0.7
0
4.7
12.4
4.9
-8.6
0
0
-9.0
14.4
2.2
2.5
0.2
0.9
2.4
4.2
4.7
4.7
0
2.7
1.9
1.9
1.9
0
0
1.9
2.0
0.1
0.2
0.1
2.3
4.3
4.6
4.7
2.5
2.2
R701 10k
R700 10k
C627 0.01 B
C632 47 10V :TA
X621
C624 0.01 B
R647 220
C646 22p
Q628 2SC4081
Q628 BUFFER
D631 MA110
R618 1k
R617 10k
C642 22p
L622 10μH
R646 1k
R623 10k
R648 180k
C629 0.047 B
4.7
2.5
1.9
4.6
3.6
0
0
4.7
0.6
CHASSIS GND A
BLK
SYNC
VD
HD
VDD1
TEST
WND
WND EN
BF
HR
VR
LALTR
EXT
CL IN
CL OUT
FLD
SC
4FSC OUT
4FSC IN
VSS2
OUT
A IN
VDD2
COMP
N.C.
N.C.
LATI
VSS
SC OFF
MODE
V INT
P SEL
IC621 CX811590
C628 1000p B
4.6
2.1
2.3
4.7
IC621
SYNC GENERATOR
C631 1 F
C630 0.01 B
R653 0
4.7
L621 10μH
09


12
13
14
15
16
17
18
19
20
21
22
23
W602 50P FP-378
50 FOCUS ANOθE
49 FOCUS F C
48 FOCUS N C
47 ZOOM W
46 ZOOM T
45 HALL (+)
44 HALL (-)
43 BIAS (+)
42 CONT (-)
41 CONT (+)
40 GNθ
39 GNθ
38 θRIVE (+)
37 FOCUS F
36 FOCUS N
35 V SUB CONT
34 AGC REF
33 N.C
32 CL
31 AGC CONT F
30 WNθ
29 θθS SI
28 θθS SCK
27 Hθ
26 Vθ
25 TG STB
24 -9V
23 15V
22 5V
21 GNθ
20 GNθ
19 PG CONT
18 V SUB CHECK
17 N.C
16 XθL1
15 XθL2
14 GND
13 ID
12 SYNC
11 BF
10 LALT
9 BLK
8 CLP4
7 CLP3
6 CLP2
5 Y
4 S1
3 S2
2 CS OUT
1 N.C.
FP-378 (FLEXIBLE)
TO VC-85 (2/4) BOARD CN705 CN706
(See Page 95)
Q633 BUFFER
R676 56k
R679 10k
Q633 XN4601
R678 10k
C687 2200p B
C689 2200p B
L683 1μH
L682 1μH
L684 1μH
R611 0
R606 0
R687 2200 CL665
R620 2200 CL666
CL668
R685 1k CL669
R699 1k CL670
R681 1k CL671
R683 1k CL672
R673 2200 CL673
R672 2200 CL674
R682 1k CL695
CL677
CL676
CL675
CL696
R688 2200 CL688
R675 1k CL681
R665 0 CL693
R666 0 CL694
R686 0 CL701
R689 1K CL692
R698 2200 CL686
R695 2200 CL683
R696 1k CL684
R697 1k CL685
R691 1k CL691
R692 1k CL690
R690 1k CL689
L653 1μH CL680
L652 1μH CL679
L651 1μH CL678
R694 1k CL682
C650 22P
L622 10μH
CL697
R649 330
R618 1k
R617 10k
C642 22p
CHASSIS GND B
W603 FP412
GNθ
FP-412 (FLEXIBLE)
TO VC-85 (2/4) BOARD CN707
(See Page 75)
4.7
L621 10μH

- **SIGNAL PATH**

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA/DATA	
REC	➡	⇒	⇛	
PB				


16
17
18
19
20
21
22
23
24
25
26
27
W602 50P FP-378
50 FOCUS ANDΘE
49 FOCUS F C
48 FOCUS N C
47 ZOOM W
46 ZOOM T
45 HALL (+)
44 HALL (-)
43 BIAS (+)
42 CONT (-)
41 CONT (+)
40 GNΘ
39 GNΘ
38 ΘRIVE (+)
37 FOCUS F
36 FOCUS N
35 V SUB CONT
34 AGC REF
33 N.C
32 CL
31 AGC CONT F
30 WNΘ
29 ΘΘS SI
28 ΘΘS SCK
27 HΘ
26 VΘ
25 TG STB
24 -9V
23 15V
22 5V
21 GNΘ
20 GNΘ
19 PG CONT
18 V SUB CHECK
17 N.C
16 XDL I
15 XΘL2
14 GND
13 ID
12 SYNC
11 BF
10 LALT
9 BLK
8 CLP4
7 CLP3
6 CLP2
5 Y
4 S1
3 S2
2 CS OUT
1 N.C.
R687 2200
CL665
R620 2200
CL666
CL668
R685 1k
CL669
R699 1k
CL670
R681 1k
CL671
R683 1k
CL672
R673 2200
CL673
R672 2200
CL674
R682 1k
CL695
CL677
CL676
CL675
CL696
R606 0
R688 2200
CL688
R675 1k
CL681
R665 0
CL693
R666 0
CL694
R686 0
CL701
R689 1K
CL692
R698 2200
CL686
R695 2200
CL683
R696 1k
CL684
R697 1k
CL685
R691 1k
CL691
R692 1k
CL690
R690 1k
CL689
L653 1μH
CL680
L652 1μH
CL679
L651 1μH
CL678
R694 1k
CL682
C650
22P
FP-378
(FLEXIBLE)
TO
VC-85
(2/4) BOARD
CN705
CN706
(See Page 95)
CL697
R649
330
CHASSIS GND 8
W603 FP412
GNΘ
FP-412
(FLEXIBLE)
TO
VC-85 (2/4) BOARD
CN707
(See Page 75)



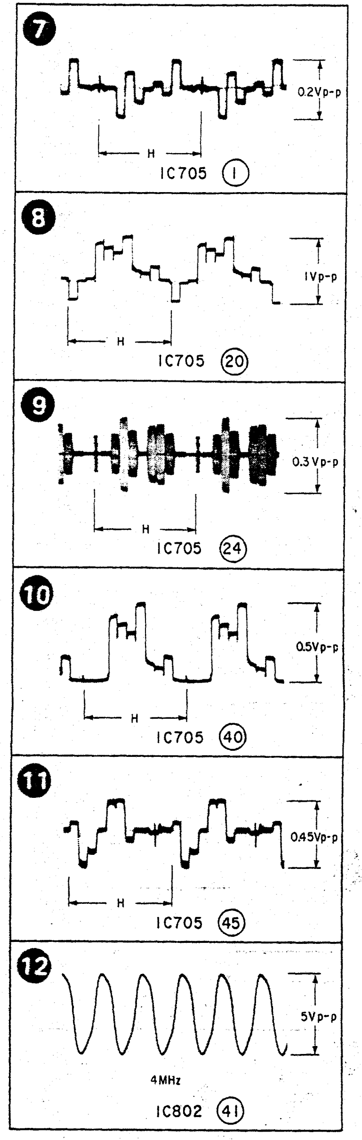
GE-10 BOARD

- **SIGNAL PATH**

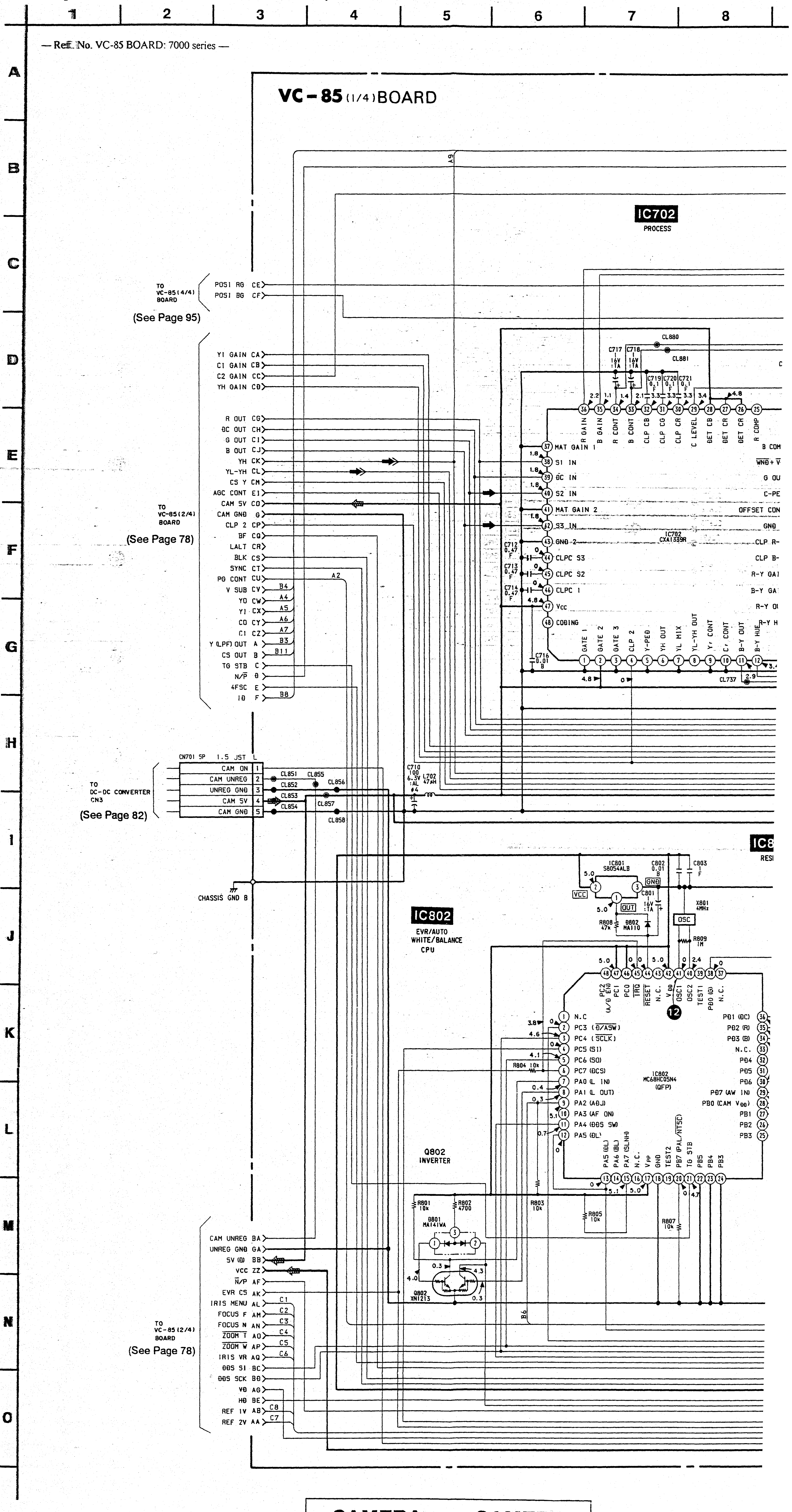
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA/DATA	
REC	➡	⇨	⇛	
PB				

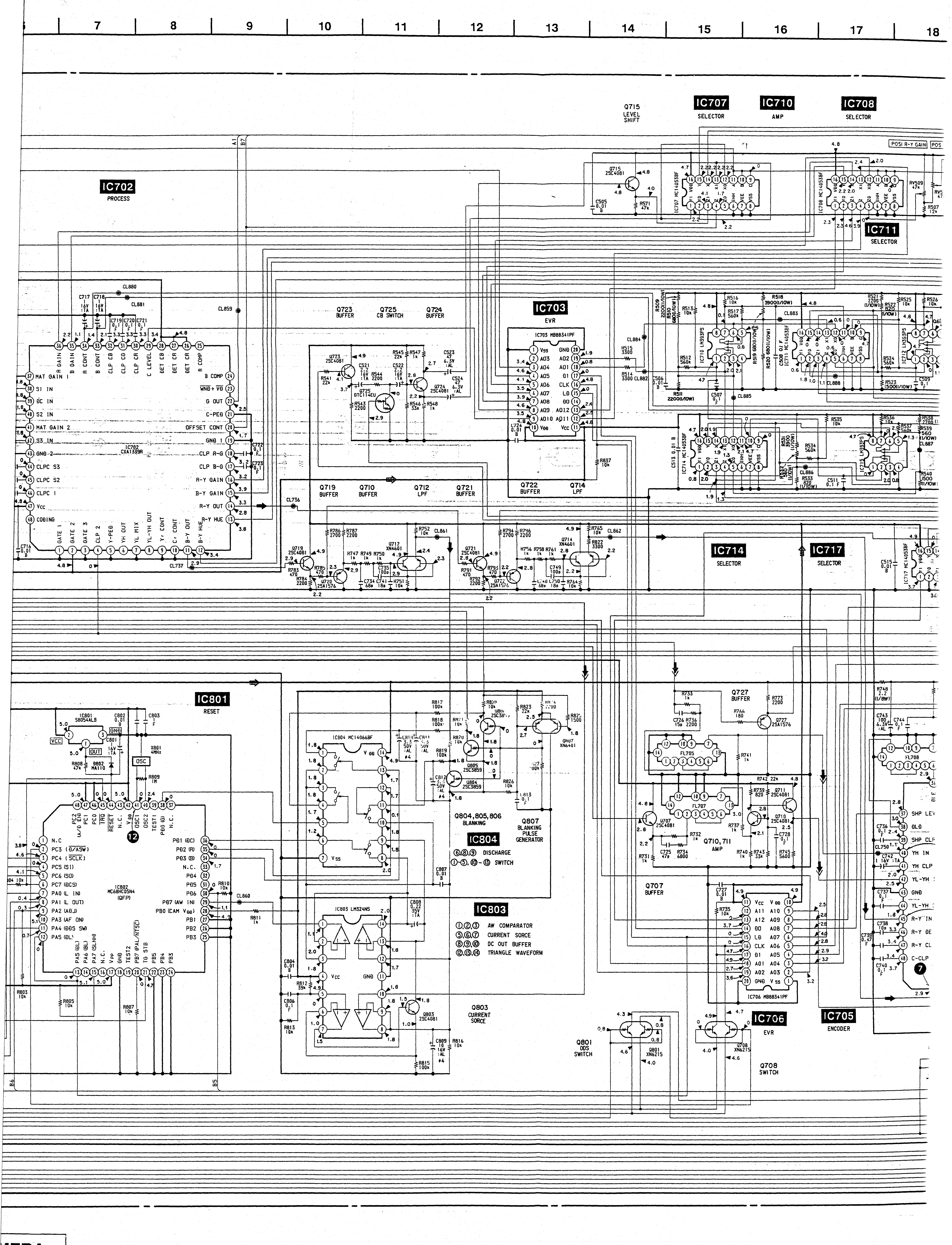
VC-85 (CAMERA PROCESS, SYSTEM CONTROL) SCHEMATIC DIAGRAM

VC-85 BOARD (1/4)



— Ref. No. VC-85 BOARD: 7000 series —


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
VC-85 (1/4) BOARD
IC702
PROCESS
IC702
CXA1339R
TO VC-85 (4/4) BOARD
(See Page 95)
POSI RG CE
POSI BG CF
TO VC-85 (2/4) BOARD
(See Page 78)
Y1 GAIN CA
C1 GAIN CB
C2 GAIN CC
YH GAIN CD
R OUT CG
BC OUT CH
G OUT CI
B OUT CJ
YH CK
YL-YH CL
CS Y CM
AGC CONT EI
CAM 5V CO
CAM GND G
CLP 2 CP
BF CQ
LALT CR
BLK CS
SYNC CT
PG CONT CU
V SUB CV
Y0 CW
Y1 CX
C0 CY
C1 CZ
Y (LPF) OUT A
CS OUT B
TG STB C
N/P D
4FSC E
ID F
TO DC-DC CONVERTER CN3
(See Page 82)
CN701 5P 1.5 JST L
CAM ON 1
CAM UNREG 2
UNREG GND 3
CAM 5V 4
CAM GND 5
CL851
CL852
CL853
CL854
CL855
CL856
CL857
CL858
C710 100 6.3V :AL
L702 47µH
CHASSIS GND B
MAT GAIN 1
S1 IN
BC IN
S2 IN
MAT GAIN 2
S3 IN
GND 2
CLPC S3
CLPC S2
CLPC 1
Vcc
CODING
GATE 1
GATE 2
GATE 3
CLP 2
Y-PED
YH OUT
YL MIX
YL-YH OUT
Yr CONT
Cr CONT
B-Y OUT
B-Y HUE
R GAIN
B GAIN
R CONT
B CONT
CLP CB
CLP CG
CLP CR
C LEVEL
DET CB
DET CR
DET CR
R COMP
B COM
WND + V
G OU
C-PE
OFFSET CON
GND
CLP R-
CLP B-
R-Y GAI
B-Y GA
R-Y OU
R-Y H
C717 16V :TA
C718 16V :TA
C719 0.1 F
C720 0.1 F
C721 0.1 F
CL880
CL881
C712 0.47 F
C713 0.47 F
C714 0.47 F
C716 0.01 B
CL737
IC802
EVR/AUTO WHITE/BALANCE CPU
IC802
MC68HC05N4 (QFP)
IC801
S8054ALB
VCC
OUT
GND
C801 1 16V :TA
C802 0.01 B
C803 1 F
R808 47k
D802 MA110
X801 4MHz
OSC
R809 1M
PC2 (A/D EN)
PC1
PC0
IRQ
RESET
N.C.
VDD
OSC1
OSC2
TEST1
PD0 (G)
N.C.
N.C
PC3 (D/A5W)
PC4 (SCLK)
PC5 (SI)
PC6 (SO)
PC7 (DCS)
PA0 (L IN)
PA1 (L OUT)
PA2 (ADJ)
PA3 (AF ON)
PA4 (DDS SW)
PA5 (DL)
PA5 (DL)
PA6 (BL)
PA7 (SLNH)
N.C.
VPP
GND
TEST2
PB7 (PAL/NTSC)
TG STB
PB5
PB4
PB3
PD1 (DC)
PD2 (R)
PD3 (B)
N.C.
PD4
PD5
PD6
PD7 (AW IN)
PB0 (CAM VDD)
PB1
PB2
PB3
R804 10k
R803 10k
R805 10k
R807 10k
Q802
INVERTER
R801 10k
R802 4700
D801 MA141WA
Q802 XN1213
IC8
RESI
TO VC-85 (2/4) BOARD
(See Page 78)
CAM UNREG BA
UNREG GND GA
5V (D) BB
VCC ZZ
N/P AF
EVR CS AK
IRIS MENU AL
FOCUS F AM
FOCUS N AN
ZOOM T AO
ZOOM W AP
IRIS VR AQ
DDS SI BC
DDS SCK BD
VD AG
HD BE
REF 1V AB
REF 2V AA
A2
A4
A5
A6
A7
B3
B4
B8
B11
B6
A9
C1
C2
C3
C4
C5
C6
C7
C8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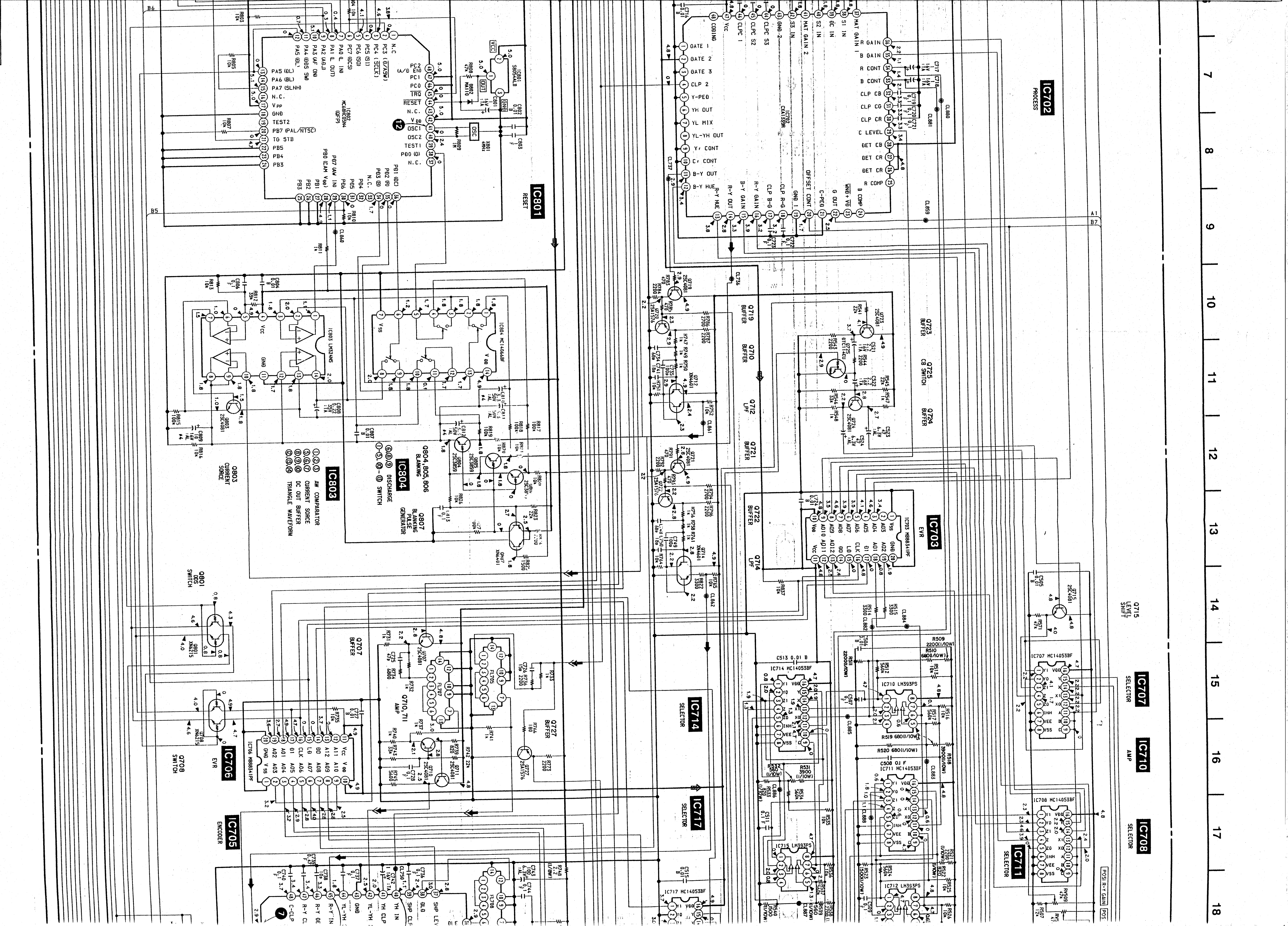
11
12
13
14
15
16
17
18
IC702
PROCESS
IC702 CXA1339R
IC703
EVR
IC703 MB88341PF
IC707
SELECTOR
IC707 MC14053BF
IC710
AMP
IC710 LM393PS
IC708
SELECTOR
IC708 MC14053BF
IC711
SELECTOR
IC711 MC14053BF
IC712 LM393PS
IC714
SELECTOR
IC714 MC14053BF
IC715 LM393PS
IC717
SELECTOR
IC717 MC14053BF
Q715
LEVEL
SHIFT
Q723
BUFFER
Q725
CB SWITCH
Q724
BUFFER
Q719
BUFFER
Q710
BUFFER
Q712
LPF
Q721
BUFFER
Q722
BUFFER
Q714
LPF
IC801
RESET
IC801 S8054ALB
IC802 MC68HC05N4 (QFP)
X801 4MHz
OSC
IC804 MC14066BF
IC804
⑥⑧⑨ DISCHARGE
①-⑤,⑩-⑬ SWITCH
IC803 LM324NS
IC803
①②③ AW COMPARATOR
⑤⑥⑦ CURRENT SORCE
⑧⑨⑩ DC OUT BUFFER
⑫⑬⑭ TRIANGLE WAVEFORM
Q804,805,806
BLANKING
Q807
BLANKING
PULSE
GENERATOR
Q803
CURRENT
SORCE
Q801
DDS
SWITCH
Q801 XN6215
Q727
BUFFER
FL705
FL707
FL708
Q710,711
AMP
Q707
BUFFER
IC706 MB88341PF
IC706
EVR
Q708
SWITCH
Q708 XN6215
IC705
ENCODER
POSI R-Y GAIN
POS
MAT GAIN 1
S1 IN
DC IN
S2 IN
MAT GAIN 2
S3 IN
GND 2
CLPC S3
CLPC S2
CLPC 1
Vcc
CODING
GATE 1
GATE 2
GATE 3
CLP 2
Y-PED
YH OUT
YL MIX
YL-YH OUT
Y↑ CONT
C↑ CONT
B-Y OUT
B-Y HUE
R-Y HUE
R-Y OUT
B-Y GAIN
R-Y GAIN
CLP B-G
CLP R-G
GND 1
OFFSET CONT
C-PED
G OUT
WND + VD
B COMP
R COMP
DET CR
DET CG
DET CB
C LEVEL
CLP CR
CLP CG
CLP CB
B CONT
R CONT
B GAIN
R GAIN
CL880
CL881
CL859
CL736
CL737
CL861
CL862
CL860
CL882
CL883
CL884
CL885
CL886
CL887
CL888
A1
B7
B5
B6
N.C
PC3 (Ā/ASW)
PC4 (SCLK)
PC5 (S1)
PC6 (SO)
PC7 (DCS)
PA0 (L IN)
PA1 (L OUT)
PA2 (ADJ)
PA3 (AF ON)
PA4 (DDS SW)
PA5 (DL)
PA6 (BL)
PA7 (SLNH)
N.C.
VPP
GND
TEST2
PB7 (PAL/NTSC)
TG STB
PB5
PB4
PB3
PB2
PB1
PB0 (CAM VDD)
PD7 (AW IN)
PD6
PD5
PD4
N.C.
PD3 (B)
PD2 (R)
PD1 (DC)
PB0 (G)
TEST1
OSC2
OSC1
VDD
N.C.
RESET
TRG
PC0
PC1
PC2 (A/D EN)
Vss
AO3
AO4
AO5
AO6
AO7
AO8
AO9
AO10
VDD
GND
AO2
AO1
DI
CLK
LD
DO
AO12
AO11
Vcc
A11
A12
A10
A09
A08
A07
A06
A05
A04
A03
A02
A01
SHP LEV
DLD
SHP CLP
YH IN
YH CLP
YL-YH
GND
R-Y IN
R-Y CL
C-CLP
⑫
⑦


IC702 PROCESS
IC801 RESET
IC803
①②③ AW COMPARATOR
⑤⑥⑦ CURRENT SORCE
⑧⑨⑩ DC OUT BUFFER
⑫⑬⑭ TRIANGLE WAVEFORM
IC804
①-⑧,⑨ DISCHARGE
⑪,⑩-⑬ SWITCH
Q804,805,806 BLANKING
Q807 BLANKING PULSE GENERATOR
Q803 CURRENT SORCE
Q801 ODS SWITCH
Q719 BUFFER
Q710 BUFFER
Q712 LPF
Q721 BUFFER
Q722 BUFFER
Q714 LPF
Q723 BUFFER
Q725 CB SWITCH
Q724 BUFFER
IC703 EVR
Q715 LEVEL SHIFT
IC707 SELECTOR
IC710 AMP
IC708 SELECTOR
IC711 SELECTOR
IC714 SELECTOR
IC717 SELECTOR
Q707 BUFFER
Q710,711 AMP
Q727 BUFFER
IC706 EVR
Q708 SWITCH
IC705 ENCODER
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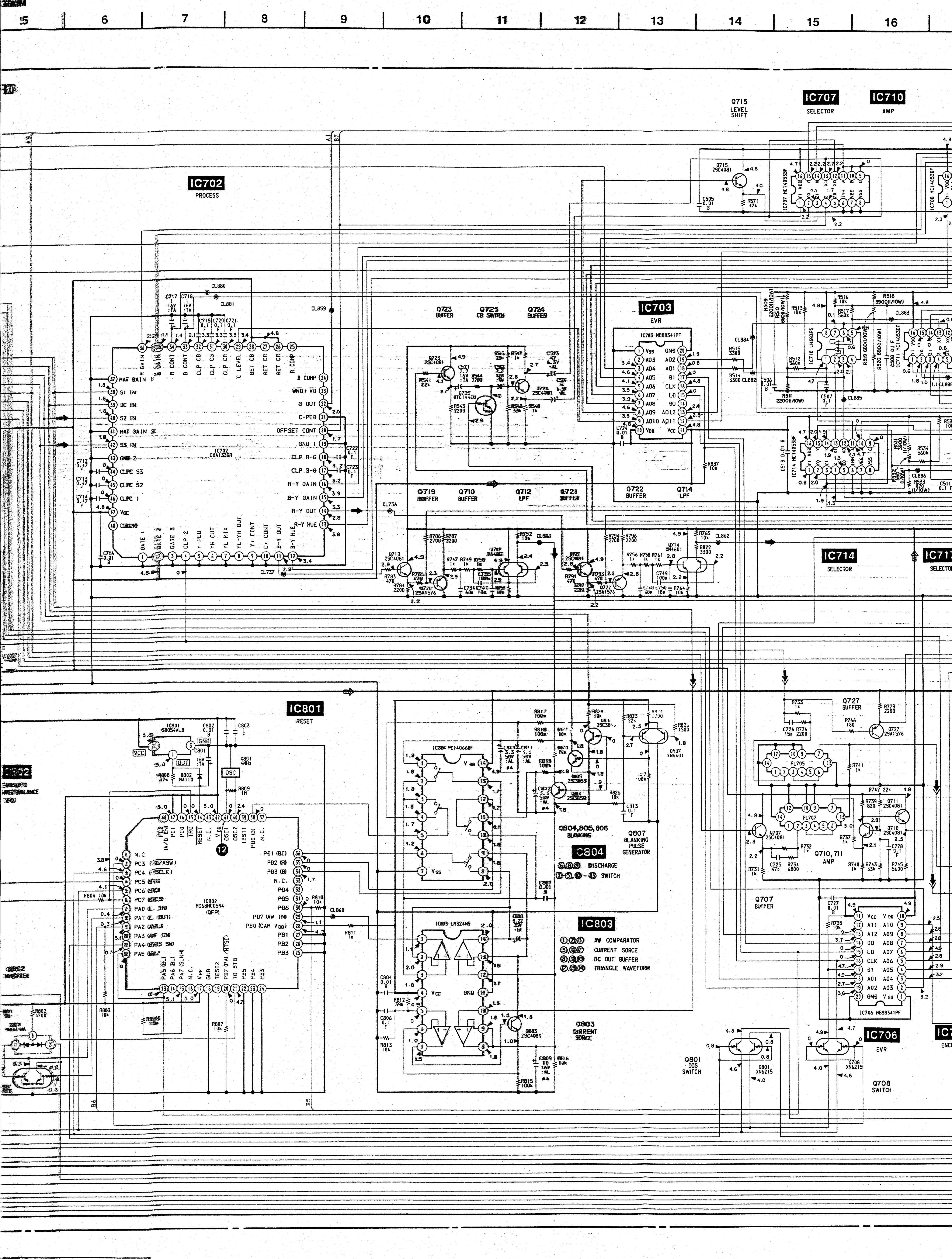
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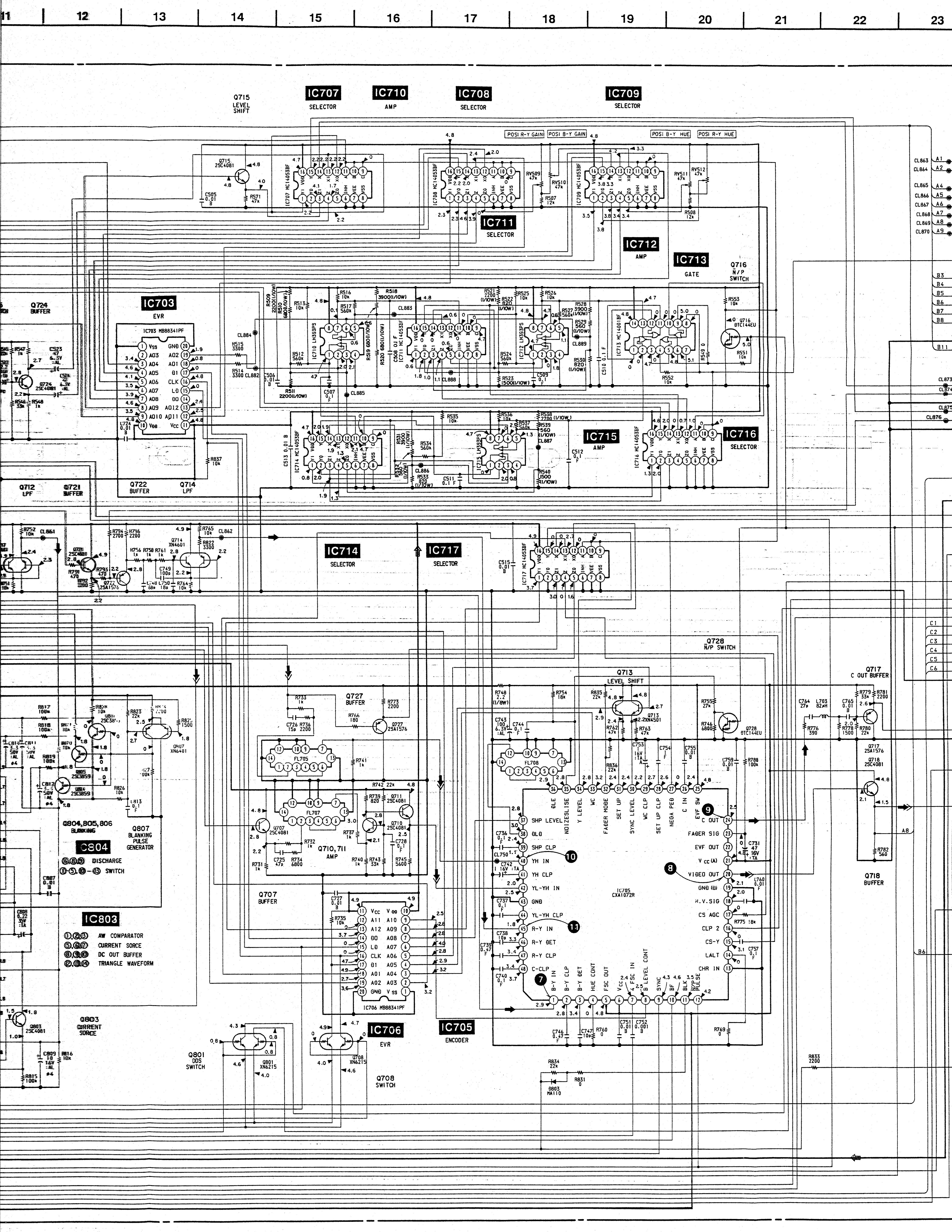
16
IC702
PROCESS
IC702 CXA1339R
IC703
EVR
IC703 MB88341PF
IC707
SELECTOR
IC707 MC14053BF
IC710
AMP
IC710 LH393PS
IC711 MC14053BF
IC714
SELECTOR
IC714 MC14053BF
IC706
EVR
IC706 MB88341PF
IC801
RESET
IC801 S8054ALB
IC802 MC68HC05N4 (QFP)
IC803
IC803 LM324NS
①②③ AW COMPARATOR
⑤⑥⑦ CURRENT SORCE
⑧⑨⑩ DC OUT BUFFER
⑫⑬⑭ TRIANGLE WAVEFORM
IC804
IC804 MC14066BF
⑤⑥⑧ DISCHARGE
①-⑤,⑩-⑬ SWITCH
Q715 LEVEL SHIFT
Q719 BUFFER
Q710 BUFFER
Q712 LPF
Q721 BUFFER
Q722 BUFFER
Q714 LPF
Q723 BUFFER
Q725 CB SWITCH
Q724 BUFFER
Q727 BUFFER
Q707 BUFFER
Q710, 711 AMP
Q708 SWITCH
Q801 DDS SWITCH
Q803 CURRENT SORCE
Q804, 805, 806 BLANKING
Q807 BLANKING PULSE GENERATOR
FL705
FL707
X801 4MHz
OSC
VCC
GND
OUT

11
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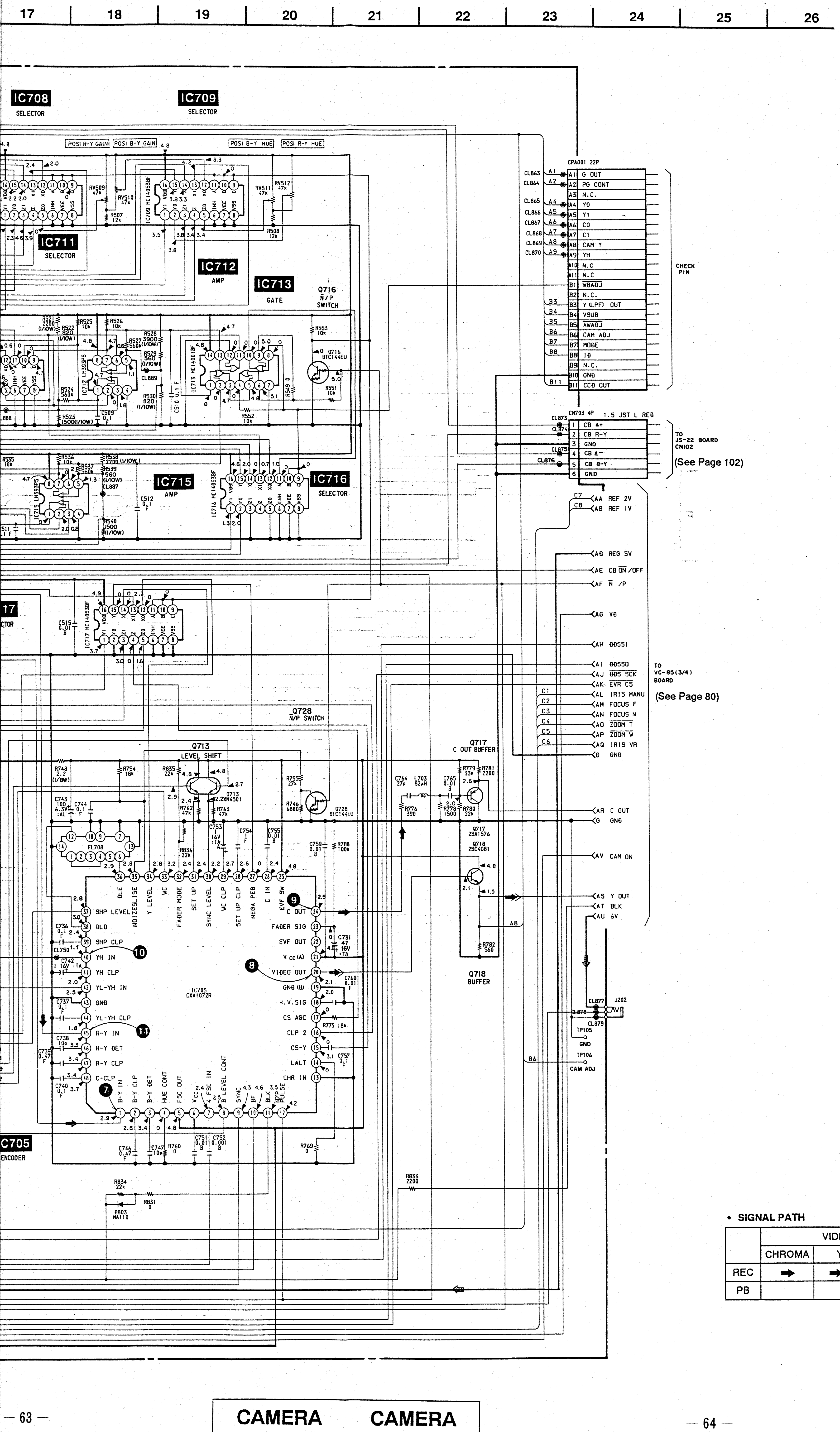
23
IC707
SELECTOR
IC710
AMP
IC708
SELECTOR
IC709
SELECTOR
Q715
LEVEL
SHIFT
POSI R-Y GAIN
POSI B-Y GAIN
POSI B-Y HUE
POSI R-Y HUE
IC711
SELECTOR
IC712
AMP
IC713
GATE
Q716
N/P
SWITCH
IC703
EVR
IC703 MB88341PF
Q724
BUFFER
IC715
AMP
IC716
SELECTOR
Q712
LPF
Q721
BUFFER
Q722
BUFFER
Q714
LPF
IC714
SELECTOR
IC717
SELECTOR
Q728
N/P SWITCH
Q713
LEVEL SHIFT
Q717
C OUT BUFFER
Q727
BUFFER
Q718
BUFFER
Q804,805,806
BLANKING
Q807
BLANKING
PULSE
GENERATOR
IC804
⑥⑧⑨ DISCHARGE
①⑤⑩-⑬ SWITCH
Q710,711
AMP
Q707
BUFFER
IC803
①②③ AW COMPARATOR
⑤⑥⑦ CURRENT SORCE
⑧⑨⑩ DC OUT BUFFER
⑫⑬⑭ TRIANGLE WAVEFORM
IC706 MB88341PF
IC706
EVR
IC705
ENCODER
IC705
CXA1072R
Q803
CURRENT
SORCE
Q801
DDS
SWITCH
Q708
SWITCH
FL705
FL707
FL708
D803
MA110
7
8
9
10
11
SHP LEVEL
OLE
SHP CLP
YH IN
YH CLP
YL-YH IN
GND
YL-YH CLP
R-Y IN
R-Y DET
R-Y CLP
C-CLP
B-Y IN
B-Y CLP
B-Y DET
HUE CONT
FSC OUT
Vcc
FSC IN
LEVEL CONT
SYNC
BF
BLK
N/P PULSE
CHR IN
LALT
CS-Y
CLP 2
CS AGC
H.V.SIG
GND (D)
VIDEO OUT
V cc (A)
EVF OUT
FADER SIG
C OUT
EVF SW
C IN
NEGA PED
SET UP CLP
WC CLP
SYNC LEVEL
SET UP
FADER MODE
WC
Y LEVEL
NOIZESLISE
CL863 A1
CL864 A2
CL865 A4
CL866 A5
CL867 A6
CL868 A7
CL869 A8
CL870 A9
B3
B4
B5
B6
B7
B8
B11
C1
C2
C3
C4
C5
C6
A8
B6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IC708
SELECTOR
IC709
SELECTOR
POSI R-Y GAIN
POSI B-Y GAIN
POSI B-Y HUE
POSI R-Y HUE
IC711
SELECTOR
IC712
AMP
IC713
GATE
Q716
N/P SWITCH
IC715
AMP
IC716
SELECTOR
IC717 MC14053BF
Q728
N/P SWITCH
Q713
LEVEL SHIFT
Q717
C OUT BUFFER
Q718
BUFFER
IC705
CXA1072R
IC705
ENCODER
FL708
CPA001 22P
A1 G OUT
A2 PG CONT
A3 N.C.
A4 Y0
A5 Y1
A6 C0
A7 C1
A8 CAM Y
A9 YH
A10 N.C
A11 N.C.
B1 WBADJ
B2 N.C.
B3 Y (LPF) OUT
B4 VSUB
B5 AWADJ
B6 CAM ADJ
B7 MODE
B8 I0
B9 N.C.
B10 GND
B11 CCD OUT
CHECK PIN
CN703 4P 1.5 JST L REG
1 CB A+
2 CB R-Y
3 GND
4 CB A-
5 CB B-Y
6 GND
TO JS-22 BOARD CN102
(See Page 102)
AA REF 2V
AB REF 1V
AD REG 5V
AE CB ON/OFF
AF N/P
AG VD
AH DDSSI
AI DDSSO
AJ DDS SCK
AK EVR CS
AL IRIS MANU
AM FOCUS F
AN FOCUS N
AO ZOOM T
AP ZOOM W
AQ IRIS VR
G GND
AR C OUT
G GND
AV CAM ON
AS Y OUT
AT BLK
AU 6V
TO VC-85(3/4) BOARD
(See Page 80)
J202
TP105 GND
TP106 CAM ADJ
SHP LEVEL
DLD
SHP CLP
YH IN
YH CLP
YL-YH IN
GND
YL-YH CLP
R-Y IN
R-Y DET
R-Y CLP
C-CLP
B-Y IN
B-Y CLP
B-Y DET
HUE CONT
FSC OUT
Vcc
FSC IN
B LEVEL CONT
SYNC
BF
BLK
PULSE
CHR IN
LALT
CS-Y
CLP 2
CS AGC
H.V.SIG
GND (W)
VIDEO OUT
Vcc (A)
EVF OUT
FADER SIG
C OUT
EVF SW
C IN
NEGA PED
SET UP CLP
WC CLP
SYNC LEVEL
SET UP
FADER MODE
WC
Y LEVEL
NOIZESLISE
DLE
D803 MA110

• **SIGNAL PATH**

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA/DATA	
REC	➡	⇛		
PB				

VC-85 (CAMERA PROCESS, SYSTEM CONTROL), FR-62 (FLUORESCENT DISPLAY) PRINTED WIRING BOARDS

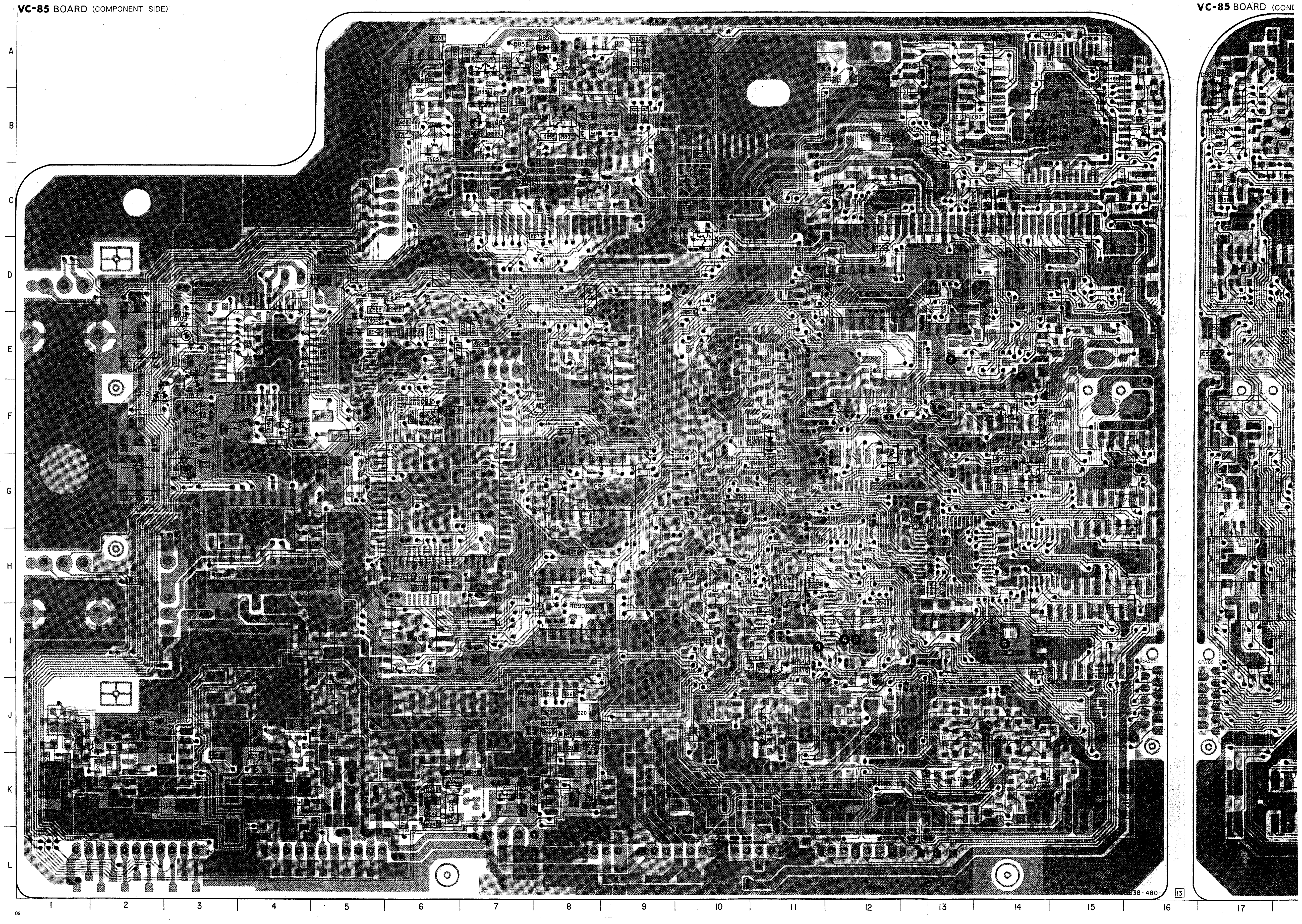
— Ref. No. FR-62 BOARD: 3000 series, VC-85 BOARD: 7000 series —

VC-85 BOARD

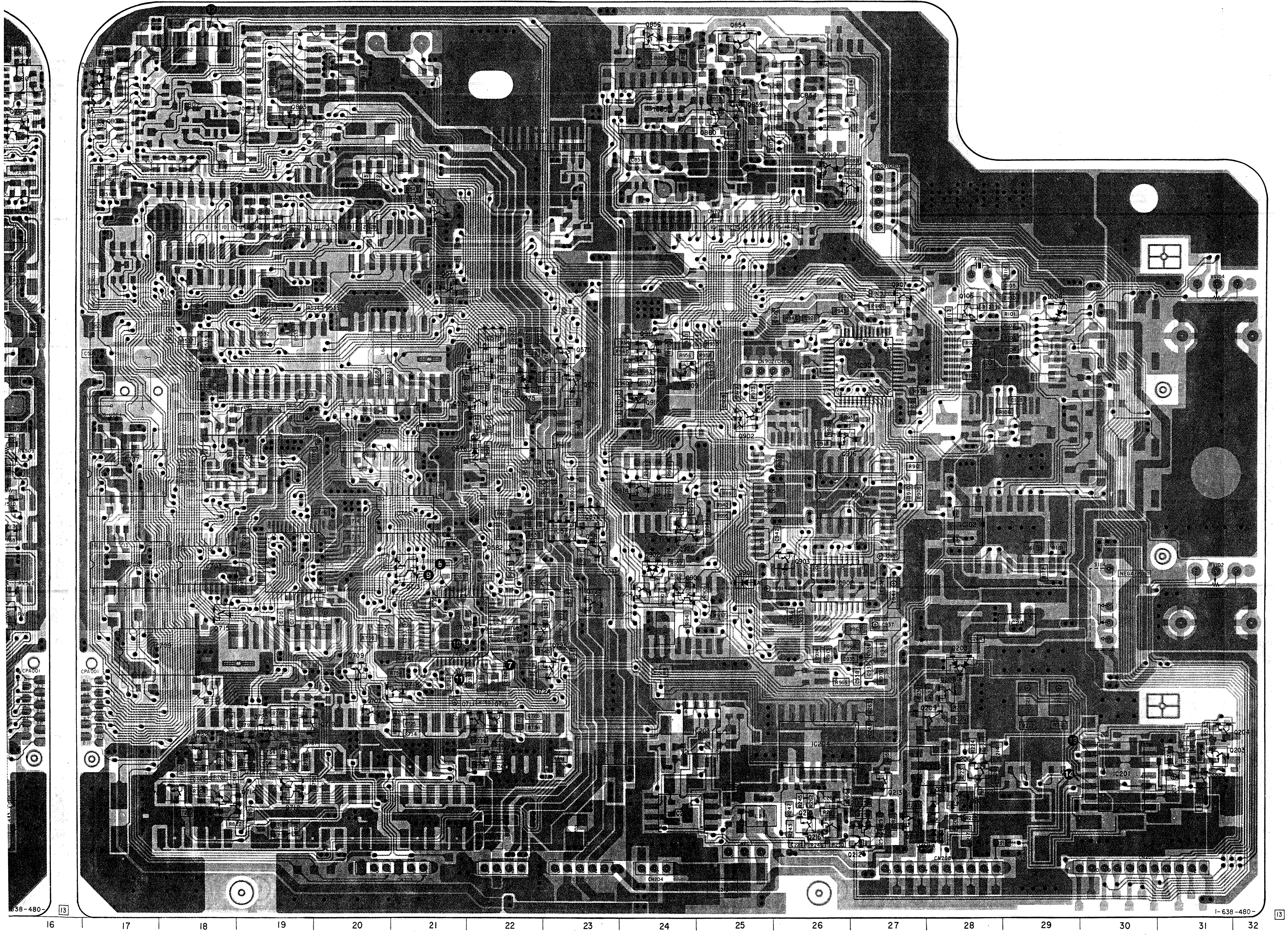
D101	E-3
D102	F-2
D103	E-3
D104	G-3
D107	F-4
D108	E-29
D201	K-28
D202	K-28
D203	I-28
D575	F-22
D576	F-22
D801	A-17
D802	A-15
D803	F-11
D852	A-8
D901	H-25
D902	H-24
IC102	G-28
IC103	E-4
IC105	G-4
IC201	K-30
IC202	K-24
IC203	J-25
IC204	J-26
IC205	J-28
IC207	I-29
IC575	F-22
IC576	E-22
IC577	G-23
IC578	G-23
IC701	G-13
IC702	H-19
IC703	H-18
IC704	F-19
IC705	I-21
IC706	G-21
IC707	G-17
IC708	H-17
IC709	I-18
IC710	C-16
IC711	C-15
IC712	C-13
IC713	C-12
IC714	D-14
IC715	D-13
IC716	D-12
IC717	F-20
IC801	A-16
IC802	A-18
IC803	A-20
IC804	A-13
IC851	A-6
IC852	A-8
IC853	B-24
IC854	B-26
IC901	G-27
IC902	H-26
IC903	H-7
IC904	F-27
IC905	G-6
IC906	H-8
IC907	I-6
IC908	G-8
Q101	F-4
Q102	F-3
Q103	F-3
Q105	E-28
Q201	J-2
Q202	J-2
Q203	J-31
Q204	J-31
Q205	K-13
Q206	J-28
Q207	K-28
Q208	I-28
Q209	J-28
Q210	K-26
Q211	K-6
Q212	K-27
Q213	K-27
Q214	K-7
Q215	K-27
Q216	K-26
Q574	D-21
Q575	E-23
Q576	E-23
Q577	E-22
Q578	F-22
Q579	B-10
Q580	C-10
Q581	H-23
Q582	H-22
Q702	I-13
Q703	F-14
Q704	K-18
Q705	F-14
Q706	G-14
Q707	J-20
Q708	B-16
Q709	I-20
Q710	J-22
Q711	J-22
Q712	K-19
Q713	H-21
Q714	K-18
Q715	H-18
Q716	C-21
Q717	I-11
Q718	I-21
Q719	J-19
Q720	J-19
Q721	J-19
Q722	J-18
Q723	H-23
Q724	I-23
Q725	I-23
Q727	F-12
Q728	H-11
Q734	H-22
Q801	B-15
Q802	A-17
Q803	B-19
Q804	B-13
Q805	B-14
Q806	B-15
Q807	B-14
Q851	A-7
Q852	A-7
Q853	B-8
Q854	A-25
Q855	A-8
Q856	A-24
Q858	B-7
Q859	B-25
Q860	B-25
Q901	H-24
Q902	F-25
Q903	H-26
Q904	H-24
Q906	E-5
Q907	D-27
Q909	E-24
Q910	F-24
Q911	E-24
Q914	G-24
Q915	F-6
Q916	F-27
Q918	C-27
Q919	C-26
Q920	G-24

VC-85 BOARD (COMPONENT SIDE)

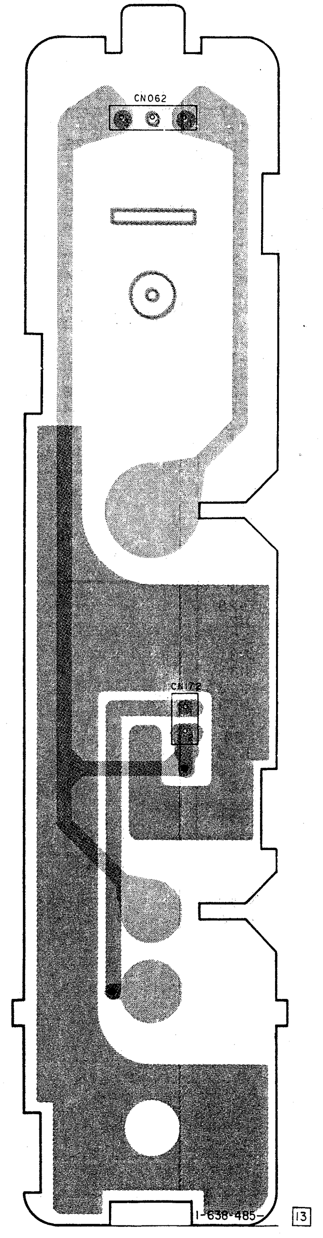
VC-85 BOARD (COND



VC-85 BOARD (CONDUCTOR SIDE)



FR-62 BOARD (CONDUCTOR SIDE)



* A-7062-661-A VC-85 BO
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<

D101	8-719-404-35	DI
D102	8-719-404-35	DI
D103	8-719-981-33	DI
D104	8-719-981-33	DI
D107	8-719-404-46	DI
D108	8-719-404-35	DI
D201	8-719-404-46	DI
D202	8-719-404-46	DI
D203	8-719-400-18	DI
D575	8-719-404-52	DI
D576	8-719-404-46	DI
D801	8-719-404-32	DI
D802	8-719-404-46	DI
D803	8-719-404-46	DI
D852	8-719-404-46	DI
D901	8-719-404-46	DI
D902	8-719-404-32	DI

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IC101	8-759-152-80	IC
IC102	8-759-937-56	IC
IC103	8-759-926-28	IC
IC201	8-752-009-51	IC
IC202	8-759-504-47	IC
IC203	8-759-983-69	IC
IC204	8-759-011-65	IC
IC205	8-759-937-56	IC
IC207	8-759-502-36	IC
IC575	8-759-983-69	IC
IC576	8-759-030-74	IC
IC577	8-759-030-74	IC
IC578	8-759-030-74	IC
IC702	8-752-034-21	IC
IC703	8-759-946-00	IC
IC704	8-759-300-71	IC
IC705	8-752-033-34	IC
IC706	8-759-946-00	IC
IC707	8-759-300-71	IC
IC708	8-759-300-71	IC
IC709	8-759-300-71	IC
IC710	8-759-100-93	IC
IC711	8-759-300-71	IC
IC712	8-759-100-93	IC
IC713	8-759-200-67	IC
IC714	8-759-300-71	IC
IC715	8-759-100-93	IC
IC716	8-759-300-71	IC
IC717	8-759-300-71	IC
IC720	8-759-234-77	IC
IC801	8-759-937-56	IC
IC802	8-759-037-60	IC
IC803	8-759-983-74	IC
IC804	8-759-008-67	IC
IC851	8-759-500-11	IC
IC852	8-759-983-69	IC
IC853	8-759-030-35	IC
IC854	8-759-983-74	IC
IC901	8-752-334-49	IC
IC902	8-759-946-00	IC
IC903	8-759-940-45	IC
IC904	8-752-326-18	IC
IC905	8-759-031-86	IC
IC906	8-759-300-71	IC
IC907	8-759-983-74	IC
IC908	8-759-009-06	IC

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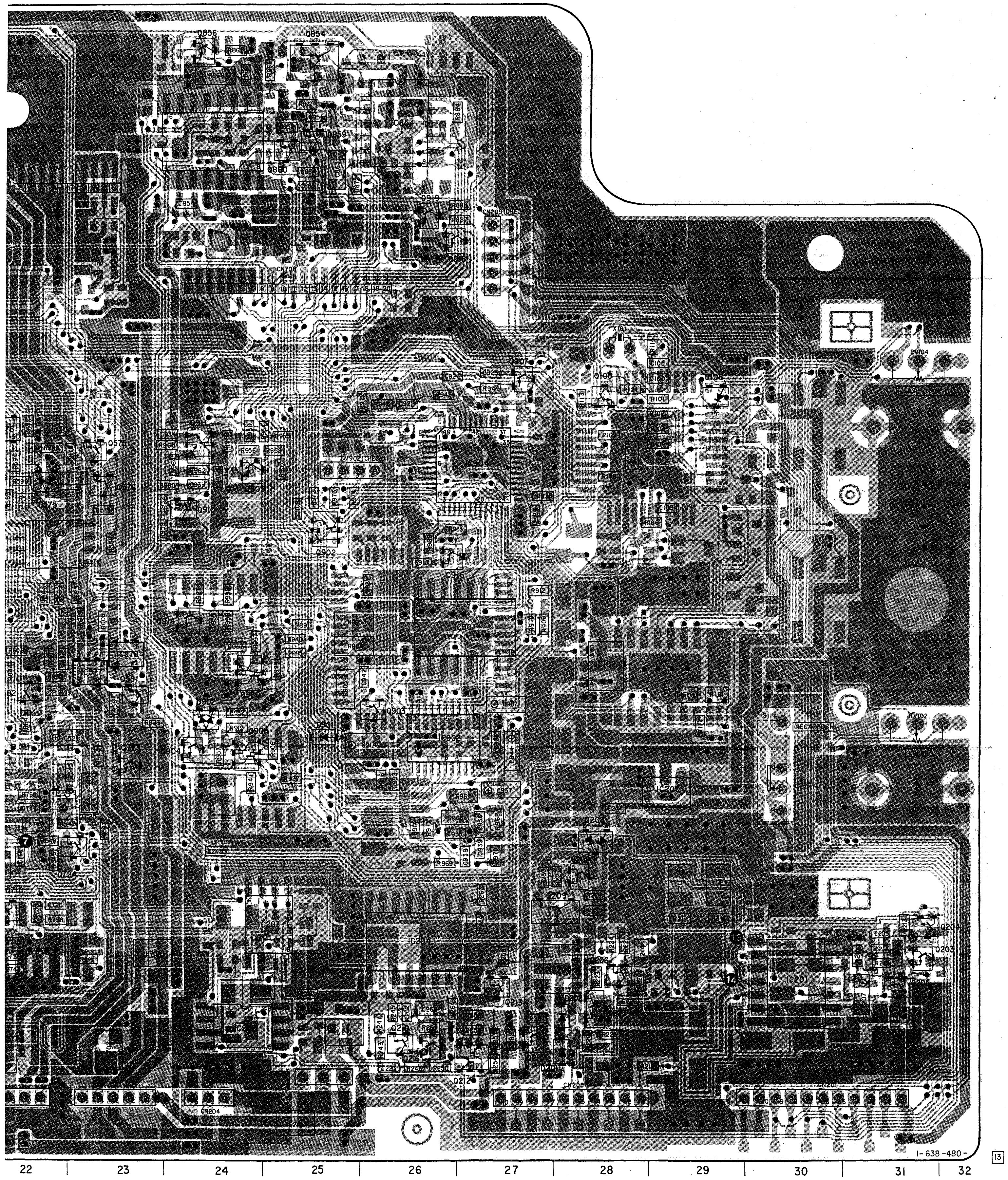
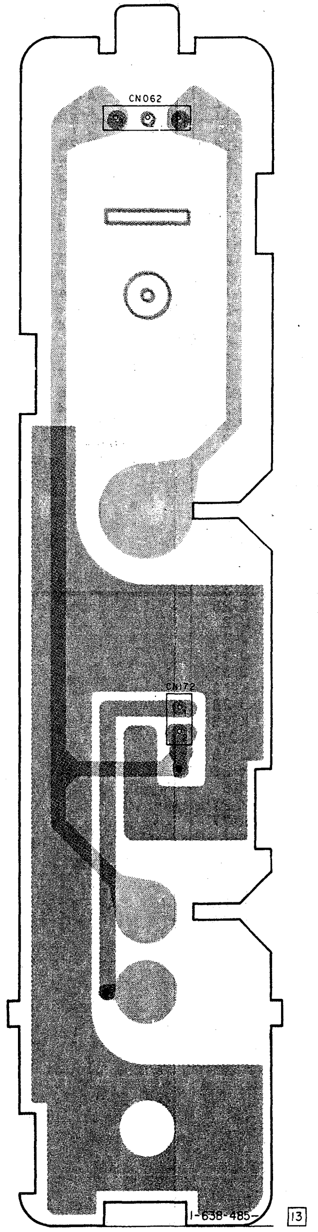
Q101	8-729-905-18	TR
Q102	8-729-907-00	TR
Q103	8-729-907-00	TR
Q105	8-729-905-18	TR
Q201	8-729-905-35	TR
Q202	8-729-905-35	TR
Q203	8-729-905-35	TR



FR-62 BOARD (CONDUCTOR SIDE)



* A-7062-661-A VC-85 BOARD, COMPLETE

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(Ref.No 7,000 Series)

< DIODE >

D101	8-719-404-35	DIODE	MA141WK
D102	8-719-404-35	DIODE	MA141WK
D103	8-719-981-33	DIODE	GL1HY-51
D104	8-719-981-33	DIODE	GL1HY-51
D107	8-719-404-46	DIODE	MA110
D108	8-719-404-35	DIODE	MA141WK
D201	8-719-404-46	DIODE	MA110
D202	8-719-404-46	DIODE	MA110
D203	8-719-400-18	DIODE	MA152WK
D575	8-719-404-52	DIODE	MA143
D576	8-719-404-46	DIODE	MA110
D801	8-719-404-32	DIODE	MA141WA
D802	8-719-404-46	DIODE	MA110
D803	8-719-404-46	DIODE	MA110
D852	8-719-404-46	DIODE	MA110
D901	8-719-404-46	DIODE	MA110
D902	8-719-404-32	DIODE	MA141WA

< IC >

IC101	8-759-152-80	IC	uPD7508BGB
IC102	8-759-937-56	IC	S-8054ALB-LM
IC103	8-759-926-28	IC	SN74HC174NS
IC201	8-752-009-51	IC	CX20095A
IC202	8-759-504-47	IC	TL026CPS
IC203	8-759-983-69	IC	LM358PS
IC204	8-759-011-65	IC	MC74HC4053F
IC205	8-759-937-56	IC	S-8054ALB-LM-S
IC207	8-759-502-36	IC	S-81350HG
IC575	8-759-983-69	IC	LM358PS
IC576	8-759-030-74	IC	SC14S66F
IC577	8-759-030-74	IC	SC14S66F
IC578	8-759-030-74	IC	SC14S66F
IC702	8-752-034-21	IC	CXA1339R
IC703	8-759-946-00	IC	MB88341PFV
IC704	8-759-300-71	IC	MC14053BF
IC705	8-752-033-34	IC	CXA1072R
IC706	8-759-946-00	IC	MB88341PFV
IC707	8-759-300-71	IC	MC14053BFP
IC708	8-759-300-71	IC	MC14053BFP
IC709	8-759-300-71	IC	MC14053BFP
IC710	8-759-100-93	IC	uPC393G2
IC711	8-759-300-71	IC	MC14053BFP
IC712	8-759-100-93	IC	uPC393G2
IC713	8-759-200-67	IC	TC4001BF
IC714	8-759-300-71	IC	MC14053BFP
IC715	8-759-100-93	IC	uPC393G2
IC716	8-759-300-71	IC	MC14053BFP
IC717	8-759-300-71	IC	MC14053BFP
IC720	8-759-234-77	IC	TC4S66F
IC801	8-759-937-56	IC	S-8054ALB-LM-S
IC802	8-759-037-60	IC	MC68HC05N4-SC406667
IC803	8-759-983-74	IC	LM324NS
IC804	8-759-008-67	IC	MC14066BF
IC851	8-759-500-11	IC	MM1036XF
IC852	8-759-983-69	IC	LM358PS
IC853	8-759-030-35	IC	MPC1725M
IC854	8-759-983-74	IC	LM324NS
IC901	8-752-334-49	IC	CXD1172AM
IC902	8-759-946-00	IC	MB88341PFV
IC903	8-759-940-45	IC	S-8054HN-CB
IC904	8-752-326-18	IC	CXD1204R
IC905	8-759-031-86	IC	MC68HC05C4-SC411531
IC906	8-759-300-71	IC	MC14053BFP
IC907	8-759-983-74	IC	LM324NS
IC908	8-759-009-06	IC	MC14052BF

< TRANSISTOR >

Q101	8-729-905-18	TRANSISTOR	DTC144EU
Q102	8-729-907-00	TRANSISTOR	DTC114EU
Q103	8-729-907-00	TRANSISTOR	DTC114EU
Q105	8-729-905-18	TRANSISTOR	DTC144EU
Q201	8-729-905-35	TRANSISTOR	2SC4081-R
Q202	8-729-905-35	TRANSISTOR	2SC4081-R
Q203	8-729-905-35	TRANSISTOR	2SC4081-R
Q204	8-729-905-35	TRANSISTOR	2SC4081-R
Q205	8-729-905-35	TRANSISTOR	2SC4081-R
Q206	8-729-905-35	TRANSISTOR	2SC4081-R
Q207	8-729-230-49	TRANSISTOR	2SC2712-YG
Q208	8-729-905-35	TRANSISTOR	2SC4081-R
Q209	8-729-106-60	TRANSISTOR	2SB1115A
Q210	8-729-905-35	TRANSISTOR	2SC4081-R
Q211	8-729-905-23	TRANSISTOR	2SA1576-R
Q212	8-729-402-84	TRANSISTOR	XN4601
Q213	8-729-905-35	TRANSISTOR	2SC4081-R
Q214	8-729-905-23	TRANSISTOR	2SA1576-R
Q215	8-729-905-35	TRANSISTOR	2SC4081-R
Q216	8-729-905-35	TRANSISTOR	2SC4081-R
Q574	8-729-905-35	TRANSISTOR	2SC4081-R
Q575	8-729-905-35	TRANSISTOR	2SC4081-R
Q576	8-729-905-35	TRANSISTOR	2SC4081-R
Q577	8-729-116-05	TRANSISTOR	2SK160
Q578	8-729-905-18	TRANSISTOR	DTC144EU
Q579	8-729-905-35	TRANSISTOR	2SC4081-R
Q580	8-729-402-84	TRANSISTOR	XN4601
Q581	8-729-905-18	TRANSISTOR	DTC144EU
Q582	8-729-905-35	TRANSISTOR	2SC4081-R
Q702	8-729-905-23	TRANSISTOR	2SA1576-R
Q703	8-729-905-35	TRANSISTOR	2SC4081-R
Q704	8-729-905-35	TRANSISTOR	2SC4081-R
Q705	8-729-905-35	TRANSISTOR	2SC4081-R
Q706	8-729-402-78	TRANSISTOR	XN6401
Q707	8-729-905-35	TRANSISTOR	2SC4081-R
Q708	8-729-403-10	TRANSISTOR	XN6215
Q709	8-729-905-35	TRANSISTOR	2SC4081-R
Q710	8-729-905-35	TRANSISTOR	2SC4081-R
Q711	8-729-905-35	TRANSISTOR	2SC4081-R
Q712	8-729-402-84	TRANSISTOR	XN4601
Q713	8-729-402-81	TRANSISTOR	XN4501
Q714	8-729-402-84	TRANSISTOR	XN4601
Q715	8-729-905-35	TRANSISTOR	2SC4081-R
Q716	8-729-905-18	TRANSISTOR	DTC144EU
Q717	8-729-905-23	TRANSISTOR	2SA1576-R
Q718	8-729-905-35	TRANSISTOR	2SC4081-R
Q719	8-729-905-35	TRANSISTOR	2SC4081-R
Q720	8-729-905-23	TRANSISTOR	2SA1576-R
Q721	8-729-905-35	TRANSISTOR	2SC4081-R
Q722	8-729-905-23	TRANSISTOR	2SA1576-R
Q723	8-729-905-35	TRANSISTOR	2SC4081-R
Q724	8-729-905-35	TRANSISTOR	2SC4081-R
Q725	8-729-907-00	TRANSISTOR	DTC114EU
Q727	8-729-905-23	TRANSISTOR	2SA1576-R
Q728	8-729-905-18	TRANSISTOR	DTC144EU
Q801	8-729-403-10	TRANSISTOR	XN6215
Q802	8-729-403-07	TRANSISTOR	XN1213
Q803	8-729-905-35	TRANSISTOR	2SC4081-R
Q804	8-729-805-42	TRANSISTOR	2SC3859
Q805	8-729-805-42	TRANSISTOR	2SC3859
Q806	8-729-805-42	TRANSISTOR	2SC3859
Q807	8-729-402-78	TRANSISTOR	XN6401
Q851	8-729-403-07	TRANSISTOR	XN1213
Q852	8-729-905-23	TRANSISTOR	2SA1576-R
Q853	8-729-402-84	TRANSISTOR	XN4601
Q854	8-729-106-60	TRANSISTOR	2SB1115A
Q855	8-729-905-35	TRANSISTOR	2SC4081-R
Q856	8-729-905-15	TRANSISTOR	DTC144WU
Q858	8-729-402-84	TRANSISTOR	XN4601
Q859	8-729-905-18	TRANSISTOR	DTC144EU
Q860	8-729-905-18	TRANSISTOR	DTC144EU
Q901	8-729-402-84	TRANSISTOR	XN4601
Q902	8-729-403-10	TRANSISTOR	XN6215
Q903	8-729-905-23	TRANSISTOR	2SA1576-R
Q904	8-729-905-18	TRANSISTOR	DTC144EU
Q906	8-729-905-35	TRANSISTOR	2SC4081-R
Q907	8-729-905-35	TRANSISTOR	2SC4081-R
Q909	8-729-905-35	TRANSISTOR	2SC4081-R
Q910	8-729-905-35	TRANSISTOR	2SC4081-R
Q911	8-729-402-19	TRANSISTOR	XN6501
Q914	8-729-905-18	TRANSISTOR	DTC144EU
Q915	8-729-905-18	TRANSISTOR	DTC144EU
Q916	8-729-905-18	TRANSISTOR	DTC144EU
Q918	8-729-905-18	TRANSISTOR	DTC144EU
Q919	8-729-905-18	TRANSISTOR	DTC144EU
Q920	8-729-402-84	TRANSISTOR	XN4601

* A-7062-661-A VC-85 BOARD. COMPLETE
****
(Ref. No 7, 000 Series)

< DIODE >

D101	8-719-404-35	DIODE	MA141WK
D102	8-719-404-35	DIODE	MA141WK
D103	8-719-981-33	DIODE	GL1HY-51
D104	8-719-981-33	DIODE	GL1HY-51
D107	8-719-404-46	DIODE	MA110
D108	8-719-404-35	DIODE	MA141WK
D201	8-719-404-46	DIODE	MA110
D202	8-719-404-46	DIODE	MA110
D203	8-719-400-18	DIODE	MA152WK
D575	8-719-404-52	DIODE	MA143
D576	8-719-404-46	DIODE	MA110
D801	8-719-404-32	DIODE	MA141WA
D802	8-719-404-46	DIODE	MA110
D803	8-719-404-46	DIODE	MA110
D852	8-719-404-46	DIODE	MA110
D901	8-719-404-46	DIODE	MA110
D902	8-719-404-32	DIODE	MA141WA

< IC >

IC101	8-759-152-80	IC	uPD7508BGB
IC102	8-759-937-56	IC	S-8054ALB-LM
IC103	8-759-926-28	IC	SN74HC174NS
IC201	8-752-009-51	IC	CX20095A
IC202	8-759-504-47	IC	TL026CPS
IC203	8-759-983-69	IC	LM358PS
IC204	8-759-011-65	IC	MC74HC4053F
IC205	8-759-937-56	IC	S-8054ALB-LM-S
IC207	8-759-502-36	IC	S-81350HG
IC575	8-759-983-69	IC	LM358PS
IC576	8-759-030-74	IC	SC14S66F
IC577	8-759-030-74	IC	SC14S66F
IC578	8-759-030-74	IC	SC14S66F
IC702	8-752-034-21	IC	CXA1339R
IC703	8-759-946-00	IC	MB88341PFV
IC704	8-759-300-71	IC	MC14053BF
IC705	8-752-033-34	IC	CXA1072R
IC706	8-759-946-00	IC	MB88341PFV
IC707	8-759-300-71	IC	MC14053BFP
IC708	8-759-300-71	IC	MC14053BFP
IC709	8-759-300-71	IC	MC14053BFP
IC710	8-759-100-93	IC	uPC393G2
IC711	8-759-300-71	IC	MC14053BFP
IC712	8-759-100-93	IC	uPC393G2
IC713	8-759-200-67	IC	TC4001BF
IC714	8-759-300-71	IC	MC14053BFP
IC715	8-759-100-93	IC	uPC393G2
IC716	8-759-300-71	IC	MC14053BFP
IC717	8-759-300-71	IC	MC14053BFP
IC720	8-759-234-77	IC	TC4S66F
IC801	8-759-937-56	IC	S-8054ALB-LM-S
IC802	8-759-037-60	IC	MC68HC05N4-SC406667
IC803	8-759-983-74	IC	LM324NS
IC804	8-759-008-67	IC	MC14066BF
IC851	8-759-500-11	IC	MM1036XF
IC852	8-759-983-69	IC	LM358PS
IC853	8-759-030-35	IC	MPC1725M
IC854	8-759-983-74	IC	LM324NS
IC901	8-752-334-49	IC	CXD1172AM
IC902	8-759-946-00	IC	MB88341PFV
IC903	8-759-940-45	IC	S-8054HN-CB
IC904	8-752-326-18	IC	CXD1204R
IC905	8-759-031-86	IC	MC68HC05C4-SC411531
IC906	8-759-300-71	IC	MC14053BFP
IC907	8-759-983-74	IC	LM324NS
IC908	8-759-009-06	IC	MC14052BF

< TRANSISTOR >

Q101	8-729-905-18	TRANSISTOR	DTC144EU
Q102	8-729-907-00	TRANSISTOR	DTC114EU
Q103	8-729-907-00	TRANSISTOR	DTC114EU
Q105	8-729-905-18	TRANSISTOR	DTC144EU
Q201	8-729-905-35	TRANSISTOR	2SC4081-R
Q202	8-729-905-35	TRANSISTOR	2SC4081-R
Q203	8-729-905-35	TRANSISTOR	2SC4081-R
Q204	8-729-905-35	TRANSISTOR	2SC4081-R
Q205	8-729-905-35	TRANSISTOR	2SC4081-R
Q206	8-729-905-35	TRANSISTOR	2SC4081-R
Q207	8-729-230-49	TRANSISTOR	2SC2712-YG
Q208	8-729-905-35	TRANSISTOR	2SC4081-R
Q209	8-729-106-60	TRANSISTOR	2SB1115A
Q210	8-729-905-35	TRANSISTOR	2SC4081-R
Q211	8-729-905-23	TRANSISTOR	2SA1576-R
Q212	8-729-402-84	TRANSISTOR	XN4601
Q213	8-729-905-35	TRANSISTOR	2SC4081-R
Q214	8-729-905-23	TRANSISTOR	2SA1576-R
Q215	8-729-905-35	TRANSISTOR	2SC4081-R
Q216	8-729-905-35	TRANSISTOR	2SC4081-R
Q574	8-729-905-35	TRANSISTOR	2SC4081-R
Q575	8-729-905-35	TRANSISTOR	2SC4081-R
Q576	8-729-905-35	TRANSISTOR	2SC4081-R
Q577	8-729-116-05	TRANSISTOR	2SK160
Q578	8-729-905-18	TRANSISTOR	DTC144EU
Q579	8-729-905-35	TRANSISTOR	2SC4081-R
Q580	8-729-402-84	TRANSISTOR	XN4601
Q581	8-729-905-18	TRANSISTOR	DTC144EU
Q582	8-729-905-35	TRANSISTOR	2SC4081-R
Q702	8-729-905-23	TRANSISTOR	2SA1576-R
Q703	8-729-905-35	TRANSISTOR	2SC4081-R
Q704	8-729-905-35	TRANSISTOR	2SC4081-R
Q705	8-729-905-35	TRANSISTOR	2SC4081-R
Q706	8-729-402-78	TRANSISTOR	XN6401
Q707	8-729-905-35	TRANSISTOR	2SC4081-R
Q708	8-729-403-10	TRANSISTOR	XN6215
Q709	8-729-905-35	TRANSISTOR	2SC4081-R
Q710	8-729-905-35	TRANSISTOR	2SC4081-R
Q711	8-729-905-35	TRANSISTOR	2SC4081-R
Q712	8-729-402-84	TRANSISTOR	XN4601
Q713	8-729-402-81	TRANSISTOR	XN4501
Q714	8-729-402-84	TRANSISTOR	XN4601
Q715	8-729-905-35	TRANSISTOR	2SC4081-R
Q716	8-729-905-18	TRANSISTOR	DTC144EU
Q717	8-729-905-23	TRANSISTOR	2SA1576-R
Q718	8-729-905-35	TRANSISTOR	2SC4081-R
Q719	8-729-905-35	TRANSISTOR	2SC4081-R
Q720	8-729-905-23	TRANSISTOR	2SA1576-R
Q721	8-729-905-35	TRANSISTOR	2SC4081-R
Q722	8-729-905-23	TRANSISTOR	2SA1576-R
Q723	8-729-905-35	TRANSISTOR	2SC4081-R
Q724	8-729-905-35	TRANSISTOR	2SC4081-R
Q725	8-729-907-00	TRANSISTOR	DTC114EU
Q727	8-729-905-23	TRANSISTOR	2SA1576-R
Q728	8-729-905-18	TRANSISTOR	DTC144EU
Q801	8-729-403-10	TRANSISTOR	XN6215
Q802	8-729-403-07	TRANSISTOR	XN1213
Q803	8-729-905-35	TRANSISTOR	2SC4081-R
Q804	8-729-805-42	TRANSISTOR	2SC3859
Q805	8-729-805-42	TRANSISTOR	2SC3859
Q806	8-729-805-42	TRANSISTOR	2SC3859
Q807	8-729-402-78	TRANSISTOR	XN6401
Q851	8-729-403-07	TRANSISTOR	XN1213
Q852	8-729-905-23	TRANSISTOR	2SA1576-R
Q853	8-729-402-84	TRANSISTOR	XN4601
Q854	8-729-106-60	TRANSISTOR	2SB1115A
Q855	8-729-905-35	TRANSISTOR	2SC4081-R
Q856	8-729-905-15	TRANSISTOR	DTC144WU
Q858	8-729-402-84	TRANSISTOR	XN4601
Q859	8-729-905-18	TRANSISTOR	DTC144EU
Q860	8-729-905-18	TRANSISTOR	DTC144EU
Q901	8-729-402-84	TRANSISTOR	XN4601
Q902	8-729-403-10	TRANSISTOR	XN6215
Q903	8-729-905-23	TRANSISTOR	2SA1576-R
Q904	8-729-905-18	TRANSISTOR	DTC144EU
Q906	8-729-905-35	TRANSISTOR	2SC4081-R
Q907	8-729-905-35	TRANSISTOR	2SC4081-R
Q909	8-729-905-35	TRANSISTOR	2SC4081-R
Q910	8-729-905-35	TRANSISTOR	2SC4081-R
Q911	8-729-402-19	TRANSISTOR	XN6501
Q914	8-729-905-18	TRANSISTOR	DTC144EU
Q915	8-729-905-18	TRANSISTOR	DTC144EU
Q916	8-729-905-18	TRANSISTOR	DTC144EU
Q918	8-729-905-18	TRANSISTOR	DTC144EU
Q919	8-729-905-18	TRANSISTOR	DTC144EU
Q920	8-729-402-84	TRANSISTOR	XN4601

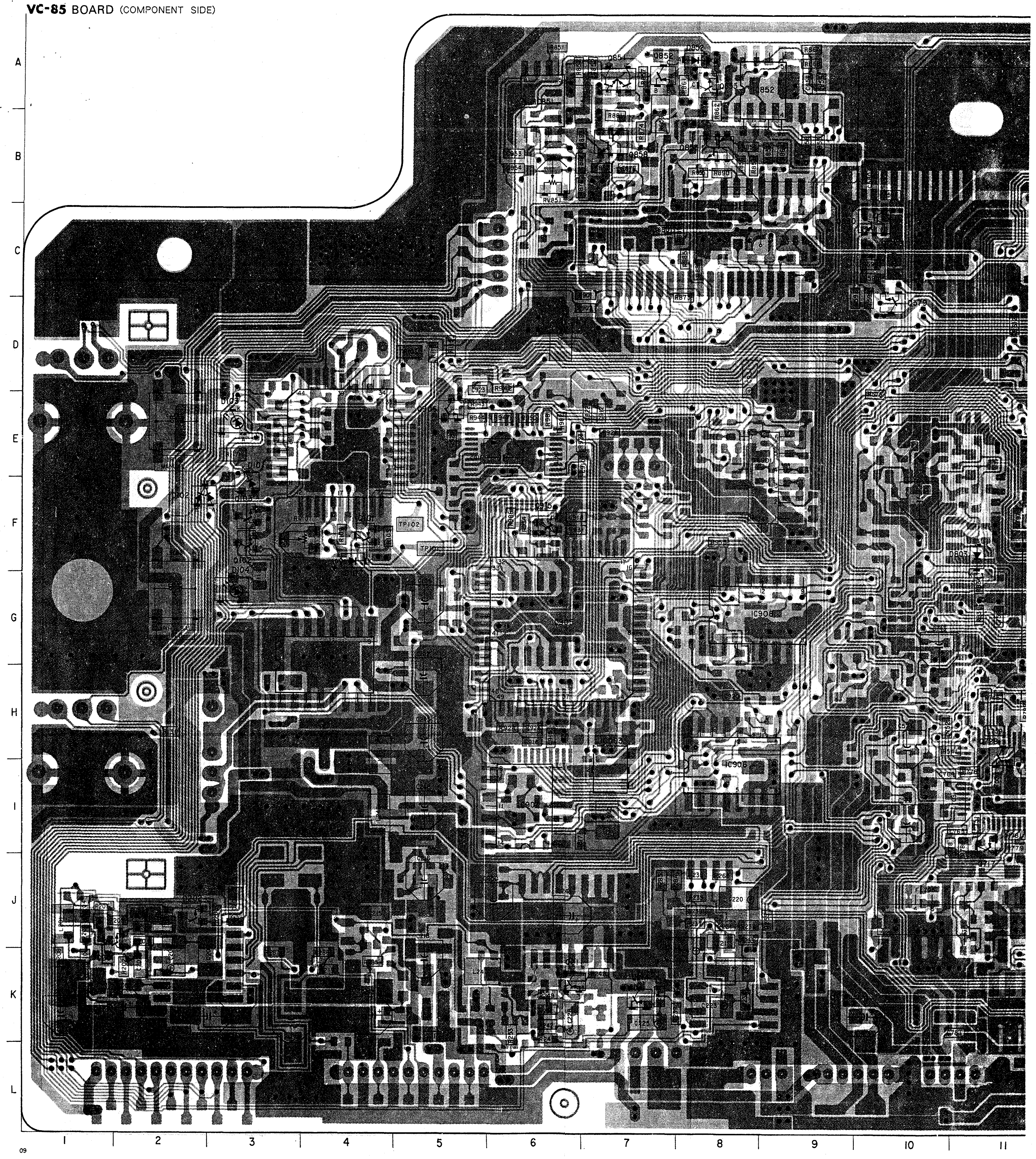
VC-85 (CAMERA PROCESS, SYSTEM CONTROL), FR-62 (FLUORESCENT DISPLAY) PRINTED WIRING BOARDS

— Ref. No. FR-62 BOARD: 3000 series, VC-85 BOARD: 7000 series —

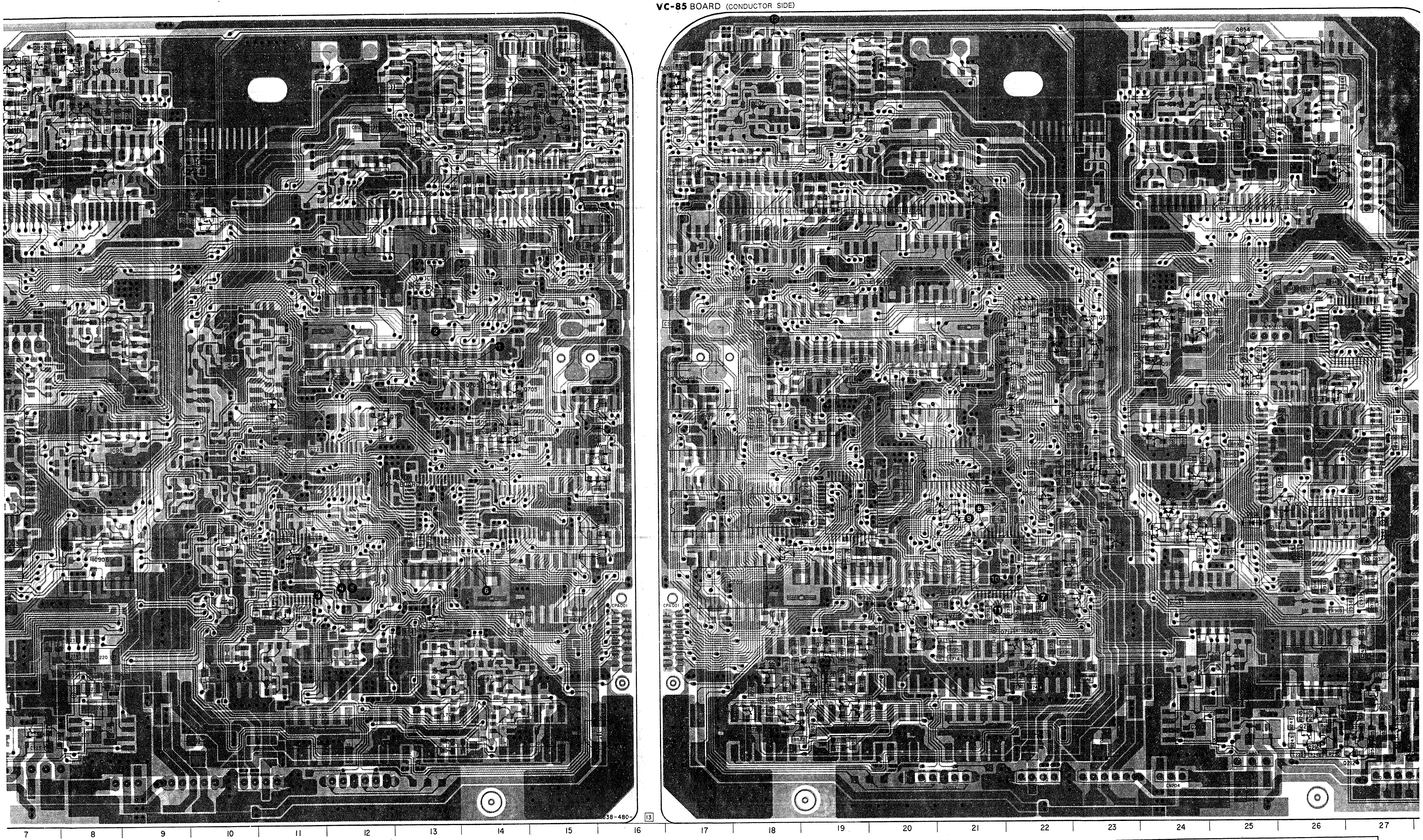
VC-85 BOARD

D101	E-3
D102	F-2
D103	E-3
D104	G-3
D107	F-4
D108	E-29
D201	K-28
D202	K-28
D203	I-28
D575	F-22
D576	F-22
D801	A-17
D802	A-15
D803	F-11
D852	A-8
D901	H-25
D902	H-24
IC102	G-28
IC103	E-4
IC105	G-4
IC201	K-30
IC202	K-24
IC203	J-25
IC204	J-26
IC205	J-28
IC207	I-29
IC575	F-22
IC576	E-22
IC577	G-23
IC578	G-23
IC701	G-13
IC702	H-19
IC703	H-18
IC704	F-19
IC705	I-21
IC706	G-21
IC707	G-17
IC708	H-17
IC709	I-18
IC710	C-16
IC711	C-15
IC712	C-13
IC713	C-12
IC714	D-14
IC715	D-13
IC716	D-12
IC717	F-20
IC801	A-16
IC802	A-18
IC803	A-20
IC804	A-13
IC851	A-6
IC852	A-8
IC853	B-24
IC854	B-26
IC901	G-27
IC902	H-26
IC903	H-7
IC904	F-27
IC905	G-6
IC906	H-8
IC907	I-6
IC908	G-8
Q101	F-4
Q102	F-3
Q103	F-3
Q105	E-28
Q201	J-2
Q202	J-2
Q203	J-31
Q204	J-31
Q205	K-13
Q206	J-28
Q207	K-28
Q208	I-28
Q209	J-28
Q210	K-26
Q211	K-6
Q212	K-27
Q213	K-27
Q214	K-7
Q215	K-27
Q216	K-26
Q574	D-21
Q575	E-23
Q576	E-23
Q577	E-22
Q578	F-22
Q579	B-10
Q580	C-10
Q581	H-23
Q582	H-22
Q702	I-13
Q703	F-14
Q704	K-18
Q705	F-14
Q706	G-14
Q707	J-20
Q708	B-16
Q709	I-20
Q710	J-22
Q711	J-22
Q712	K-19
Q713	H-21
Q714	K-18
Q715	H-18
Q716	C-21
Q717	I-11
Q718	I-21
Q719	J-19
Q720	J-19
Q721	J-19
Q722	J-18
Q723	H-23
Q724	I-23
Q725	I-23
Q727	F-12
Q728	H-11
Q734	H-22
Q801	B-15
Q802	A-17
Q803	B-19
Q804	B-13
Q805	B-14
Q806	B-15
Q807	B-14
Q851	A-7
Q852	A-7
Q853	B-8
Q854	A-25
Q855	A-8
Q856	A-24
Q858	B-7
Q859	B-25
Q860	B-25
Q901	H-24
Q902	F-25
Q903	H-26
Q904	H-24
Q906	E-5
Q907	D-27
Q909	E-24
Q910	F-24
Q911	E-24
Q914	G-24
Q915	F-6
Q916	F-27
Q918	C-27
Q919	C-26
Q920	G-24

VC-85 BOARD (COMPONENT SIDE)



VC-85 BOARD (CONDUCTOR SIDE)


CPA001
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CN204
IC908
IC906
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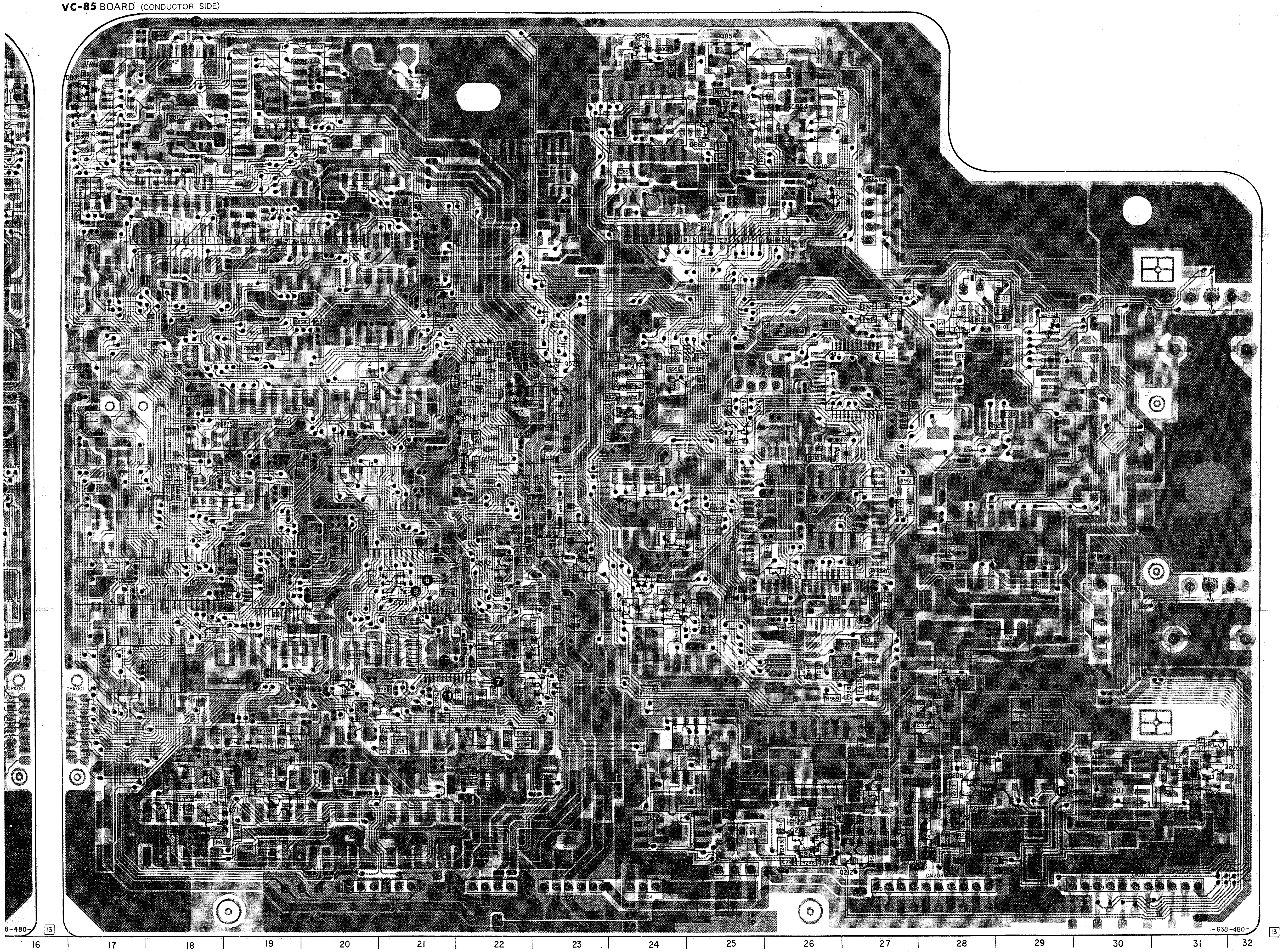
VC-85 BOARD (CONDUCTOR SIDE)


1-638-480-
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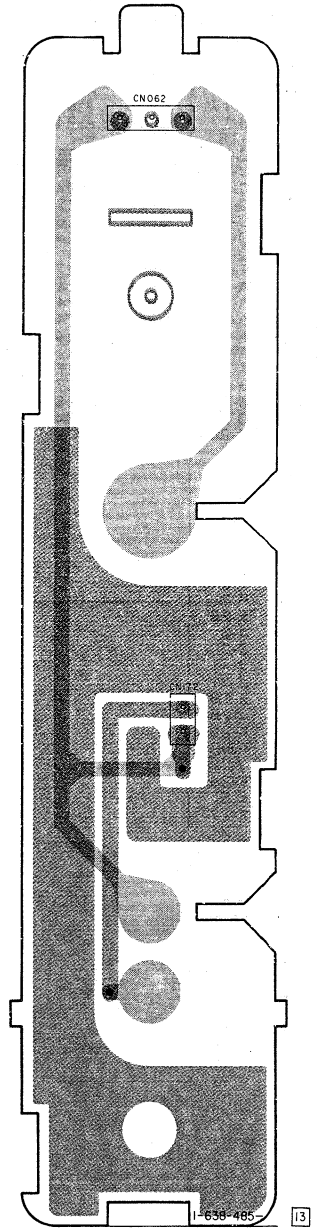
CPA001
CN204
CN208
RV104
RV102
IC201

FR-62 BOARD (CONDUCTOR SIDE)


CN062
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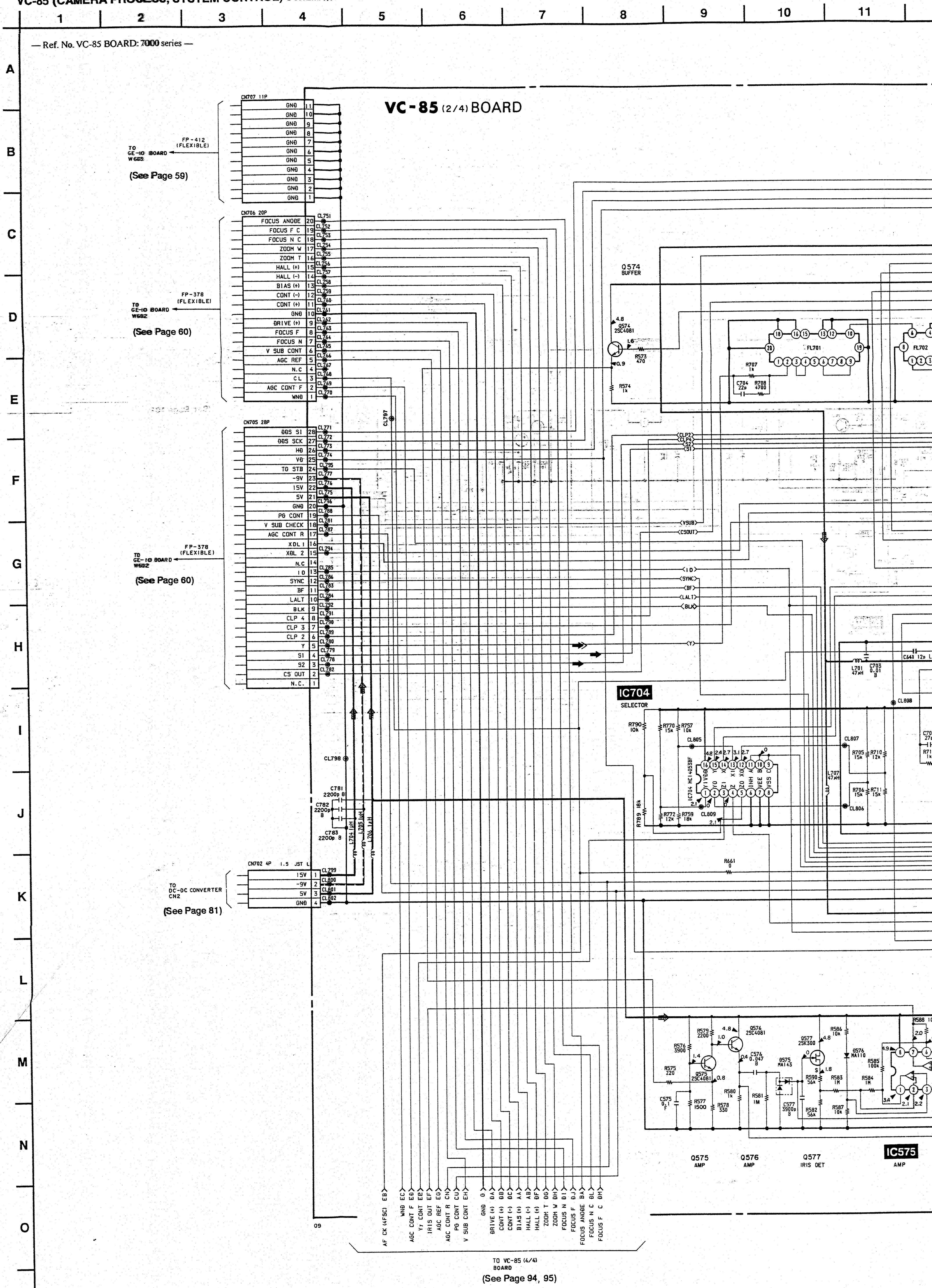
13

VC-85 (CAMERA PROCESS, SYSTEM CONTROL) SCHEMATIC DIAGRAM

— Ref. No. VC-85 BOARD: 7000 series —



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A
B
C
D
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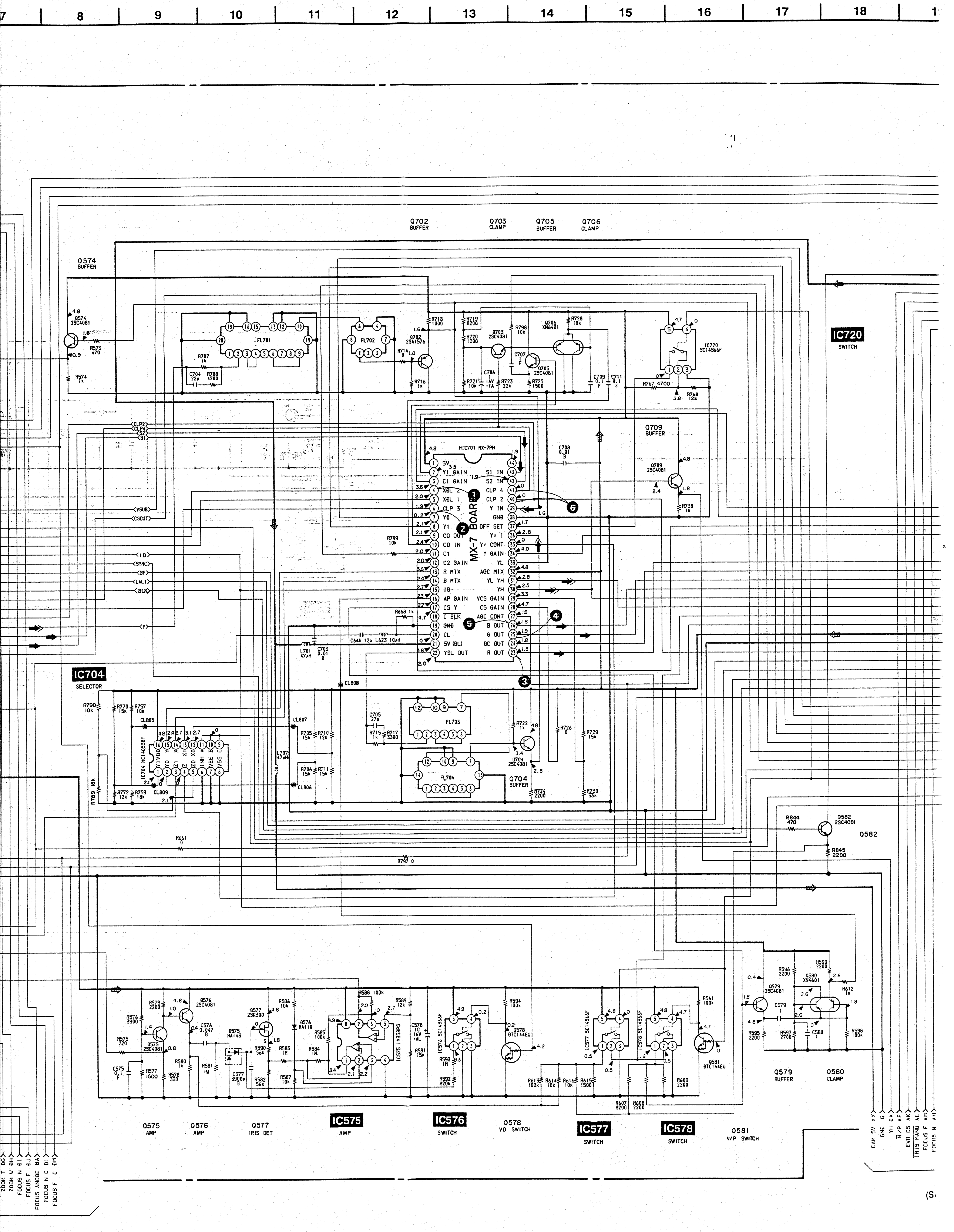
I
J
K
L
M
N
O
VC-85 (2/4) BOARD
CN707 11P
GND 11
GND 10
GND 9
GND 8
GND 7
GND 6
GND 5
GND 4
GND 3
GND 2
GND 1
FP-412 (FLEXIBLE)
TO GE-10 BOARD W663
(See Page 59)
CN706 20P
FOCUS ANODE 20
FOCUS F C 19
FOCUS N C 18
ZOOM W 17
ZOOM T 16
HALL (+) 15
HALL (−) 14
BIAS (+) 13
CONT (−) 12
CONT (+) 11
GND 10
DRIVE (+) 9
FOCUS F 8
FOCUS N 7
V SUB CONT 6
AGC REF 5
N.C 4
CL 3
AGC CONT F 2
WND 1
CL751
CL752
CL753
CL754
CL755
CL756
CL757
CL758
CL759
CL760
CL761
CL762
CL763
CL764
CL765
CL766
CL767
CL768
CL769
CL770
FP-378 (FLEXIBLE)
TO GE-10 BOARD W682
(See Page 60)
CL797
CN705 28P
DDS SI 28
DDS SCK 27
HD 26
VD 25
TG STB 24
-9V 23
15V 22
5V 21
GND 20
PG CONT 19
V SUB CHECK 18
AGC CONT R 17
XDL 1 16
XDL 2 15
N.C 14
I D 13
SYNC 12
BF 11
LALT 10
BLK 9
CLP 4 8
CLP 3 7
CLP 2 6
Y 5
S1 4
S2 3
CS OUT 2
N.C. 1
CL771
CL772
CL773
CL774
CL795
CL777
CL776
CL775
CL796
CL788
CL781
CL787
CL794
CL785
CL786
CL783
CL784
CL792
CL791
CL790
CL789
CL780
CL779
CL778
CL782
FP-378 (FLEXIBLE)
TO GE-10 BOARD W682
(See Page 60)
CL798
C781 2200p B
C782 2200p B
C783 2200p B
L704 1μH
L705 1μH
L706 1μH
CN702 4P 1.5 JST L
15V 1
-9V 2
5V 3
GND 4
CL799
CL800
CL801
CL802
TO DC-DC CONVERTER CN2
(See Page 81)
Q574 BUFFER
4.8
Q574 2SC4081
1.6
R573 470
0.9
R574 1k
FL701
R707 1k
C704 22p
R708 4700
FL702
CLP2
CLP4
S2
S1
VSUB
CSOUT
I D
SYNC
BF
LALT
BLK
Y
L701 47μH
C703 0.01 B
C641 12p
CL808
IC704
SELECTOR
R790 10k
R770 15k
R757 10k
CL805
4.8
2.4
2.7
3.1
2.7
0
IC704 MC14053BF
VDD
Y
X
X1
X0
A
B
C
Y1
Y0
Z1
Z
Z0
INH
VEE
VSS
2.1
0
0
2.1
CL809
R789 18k
R772 12k
R759 18k
L707 47μH
CL807
R705 15k
R710 12k
R706 15k
R711 15k
CL806
R661 0
Q575 AMP
Q576 AMP
Q577 IRIS DET
IC575 AMP
R579 2200
R576 3900
R575 220
C575 0.1 F
R577 1500
R578 330
1.4
1.0
4.8
0.4
0.8
Q575 2SC4081
Q576 2SC4081
C576 0.047 B
R580 1k
R581 1M
D575 MA143
C577 3900p B
Q577 2SK300
0
4.8
S
1.8
R590 56k
R582 56k
R586 10k
D576 MA110
R583 1M
R587 10k
R585 100k
R584 1M
R588
2.0
4.9
3.4
2.1
2.2
09
AF CK (4FSC) EB
WND EC
AGC CONT F ED
YT CONT EE
IRIS OUT EF
AGC REF EG
AGC CONT R CN
PG CONT CU
V SUB CONT EH
GND G
DRIVE (+) DA
CONT (+) DB
CONT (−) DC
BIAS (+) AA
HALL (−) AB
HALL (+) DF
ZOOM T DG
ZOOM W DH
FOCUS N DI
FOCUS F DJ
FOCUS ANODE BA
FOCUS N C DL
FOCUS F C DM
TO VC-85 (4/4) BOARD
(See Page 94, 95)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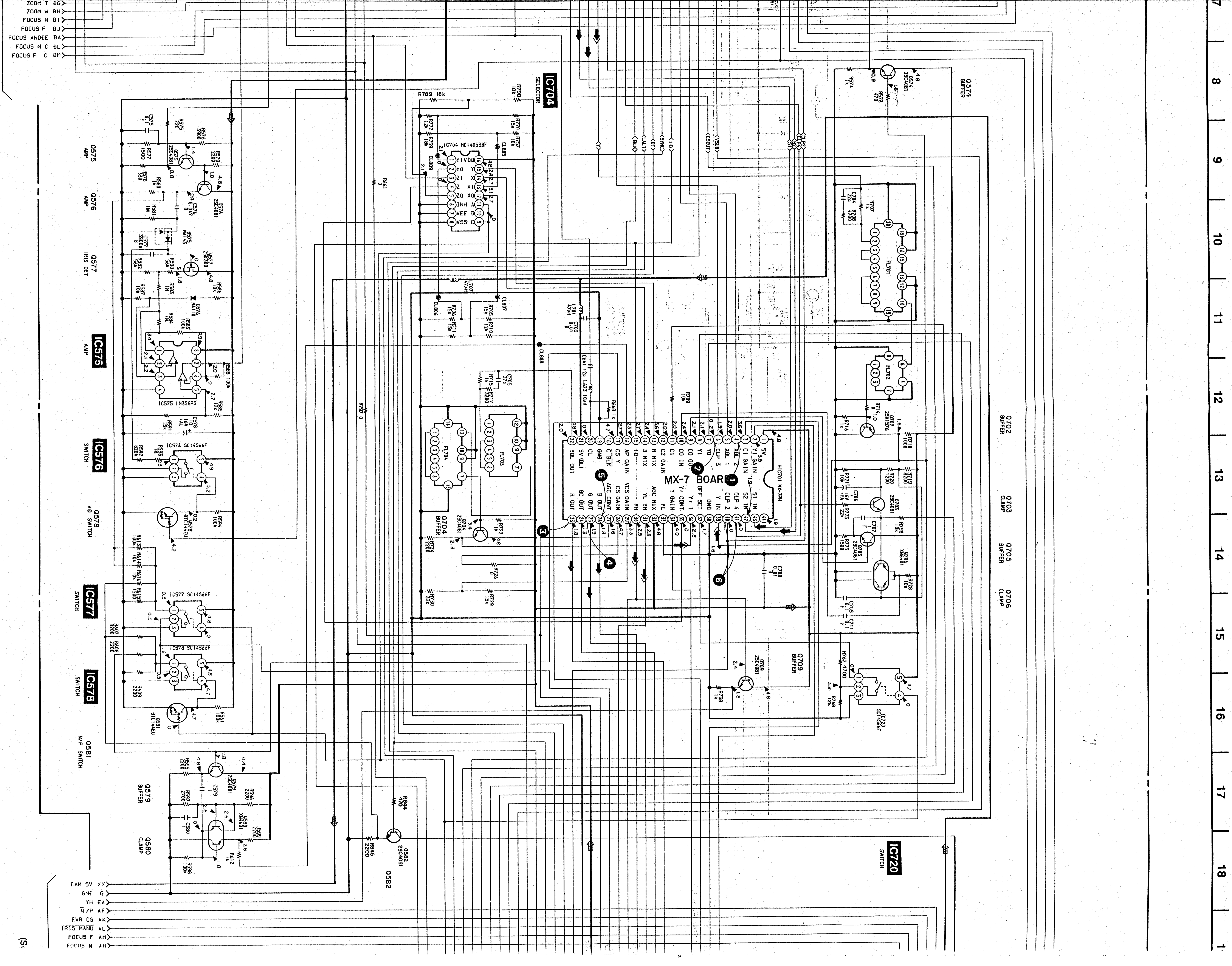
11
12
13
14
15
16
17
18
Q574 BUFFER
Q574 2SC4081
R573 470
R574 1k
Q702 BUFFER
Q703 CLAMP
Q705 BUFFER
Q706 CLAMP
FL701
FL702
R707 1k
C704 22p
R708 4700
R718 1000
Q702 2SA1576
R714 0
R716 1k
R719 8200
R720 1200
Q703 2SC4081
R798 10k
Q706 XN6401
R728 10k
C707 F
Q705 2SC4081
C706 16V :TA
R721 10k
R723 22k
R725 1500
C709 0.1 F
C711 0.1 F
IC720 SC14S66F
R767 4700
R768 12k
IC720
SWITCH
<CLP2>
<CLP4>
<S2>
<S1>
<VSUB>
<CSOUT>
<ID>
<SYNC>
<BF>
<LALT>
<BLK>
<Y>
HIC701 MX-7PH
MX-7 BOARD
5V
Y1 GAIN
C1 GAIN
XθL 2
XθL 1
CLP 3
Y0
Y1
C0 OUT
C0 IN
C1
C2 GAIN
R MTX
B MTX
Iθ
AP GAIN
CS Y
C BLK
GND
CL
5V (ΘL)
YθL OUT
S1 IN
S2 IN
CLP 4
CLP 2
Y IN
GND
OFF SET
Yr 1
Yr CONT
Y GAIN
YL
AGC MIX
YL YH
YH
VCS GAIN
CS GAIN
AGC CONT
B OUT
G OUT
θC OUT
R OUT
C708 0.01 B
Q709 BUFFER
Q709 2SC4081
R738 1k
R799 10k
R668 1k
C641 12p
L623 10μH
L701 47μH
C703 0.01 B
IC704
SELECTOR
R790 10k
R770 15k
R757 10k
CL805
IC704 MC14053BF
Y1 VDD
Y0 Y
Z1 X
Z X1
Z0 X0
INH A
VEE B
VSS C
R789 18k
R772 12k
R759 18k
CL809
CL807
CL806
CL808
R705 15k
R710 12k
R706 15k
R711 15k
L707 47μH
C705 27p
R715 1k
R717 3300
FL703
FL704
R722 1k
Q704 2SC4081
Q704 BUFFER
R724 2200
R726 0
R729 15k
R730 33k
R661 0
R797 0
R844 470
Q582 2SC4081
Q582
R845 2200
Q575 2SC4081
R575 220
R576 3900
C575 0.1 F
R577 1500
R578 330
R579 2200
Q576 2SC4081
C576 0.047 B
R580 1k
R581 1M
D575 MA143
C577 3900p B
Q577 2SK300
R590 56k
R582 56k
R583 1M
R586 10k
D576 MA110
R587 10k
R584 1M
R585 100k
R588 100k
R589 12k
IC575 LH358PS
C578 10 16V :AL
R591 15k
IC576 SC14S66F
R593 1M
R592 820k
R594 100k
Q578 DTC144EU
R613 100k
R614 10k
R616 10k
R615 1500
IC577 SC14S66F
IC578 SC14S66F
R607 8200
R608 2200
R609 2200
R561 100k
Q581 DTC144EU
Q579 2SC4081
R596 2200
C579 1
R595 2200
R597 2700
Q580 XN4601
R599 2200
R612 1k
C580 1
R598 100k
Q579 BUFFER
Q580 CLAMP
Q575 AMP
Q576 AMP
Q577 IRIS DET
IC575 AMP
IC576 SWITCH
Q578 VD SWITCH
IC577 SWITCH
IC578 SWITCH
Q581 N/P SWITCH
ZOOM T BG
ZOOM W BH
FOCUS N BI
FOCUS F BJ
FOCUS ANODE BA
FOCUS N C BL
FOCUS F C BM
CAM 5V XX
GND G
YH EA
N/P AF
EVR CS AK
IRIS MANU AL
FOCUS F AM
FOCUS N AN


ZOOM T 0G
ZOOM W 0H
FOCUS N 0I
FOCUS F 0J
FOCUS ANODE BA
FOCUS N C 0L
FOCUS F C 0M
IC704 SELECTOR
IC704 MC14053BF
R789 18k
R790 10k
CL805
CL806
CL807
CL808
CL809
L707 47μH
L701 47μH
Q575 AMP
Q576 AMP
Q577 IRIS DET
IC575 AMP
IC575 LM358PS
IC576 SWITCH
IC576 SC14S66F
Q578 VD SWITCH
IC577 SWITCH
IC577 SC14S66F
IC578 SWITCH
IC578 SC14S66F
Q581 N/P SWITCH
Q579 BUFFER
Q580 CLAMP
Q582
Q704 BUFFER
FL701
FL702
FL703
FL704
MX-7 BOARD
HIC701 MX-7PH
Q574 BUFFER
Q702 BUFFER
Q703 CLAMP
Q705 BUFFER
Q706 CLAMP
Q709 BUFFER
IC720 SWITCH
IC720 SC14S66F
CAM 5V XX
GND G
YH EA
N/P AF
EVR CS AK
IRIS MANU AL
FOCUS F AM
FOCUS N AN
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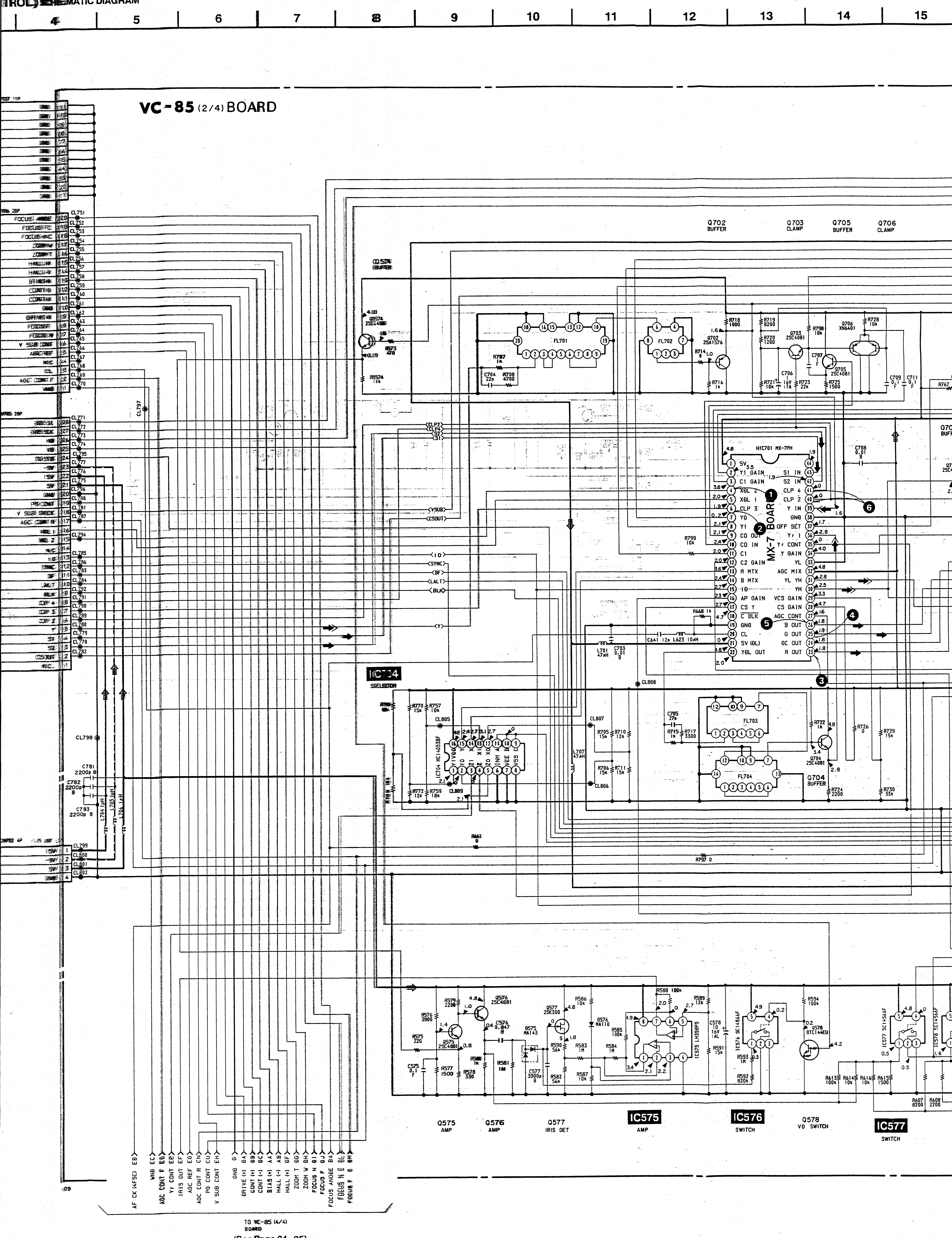
VC-85 (2/4) BOARD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15
MX-7 BOARD
HIC701 MX-7PH
IC704 MC14053BF
IC704 SELECTOR
FL701
FL702
FL703
FL704
Q574 BUFFER
Q702 BUFFER
Q703 CLAMP
Q705 BUFFER
Q706 CLAMP
Q704 BUFFER
Q575 AMP
Q576 AMP
Q577 IRIS DET
IC575 AMP
IC576 SWITCH
Q578 VD SWITCH
IC577 SWITCH
IC575 LM358PS
IC576 SC14566F
IC577 SC14566F
IC578 SC14566F
L704 1μH
L705 1μH
L706 1μH
C781 2200p B
C782 2200p B
C783 2200p B
CL797
CL798
CL805
CL806
CL807
CL808
CL809
L701 47μH
L707 47μH
C703 0.01 B
C641 12p
L623 10μH
R668 1k
R799 10k
R797 0
1 5V
2 Y1 GAIN
3 C1 GAIN
4 XBL 2
5 XBL 1
6 CLP 3
7 Y0
8 Y1
9 C0 OUT
10 C0 IN
11 C1
12 C2 GAIN
13 R MTX
14 B MTX
15 ID
16 AP GAIN
17 CS Y
18 C BLK
19 GND
20 CL
21 5V (BL)
22 YBL OUT
23 R OUT
24 BC OUT
25 G OUT
26 B OUT
27 AGC CONT
28 CS GAIN
29 VCS GAIN
30 YH
31 YL YH
32 AGC MIX
33 YL
34 Y GAIN
35 Yr CONT
36 Yr 1
37 OFF SET
38 GND
39 Y IN
40 CLP 2
41 CLP 4
42 S2 IN
43 S1 IN
44
<CLP2>
<CLP4>
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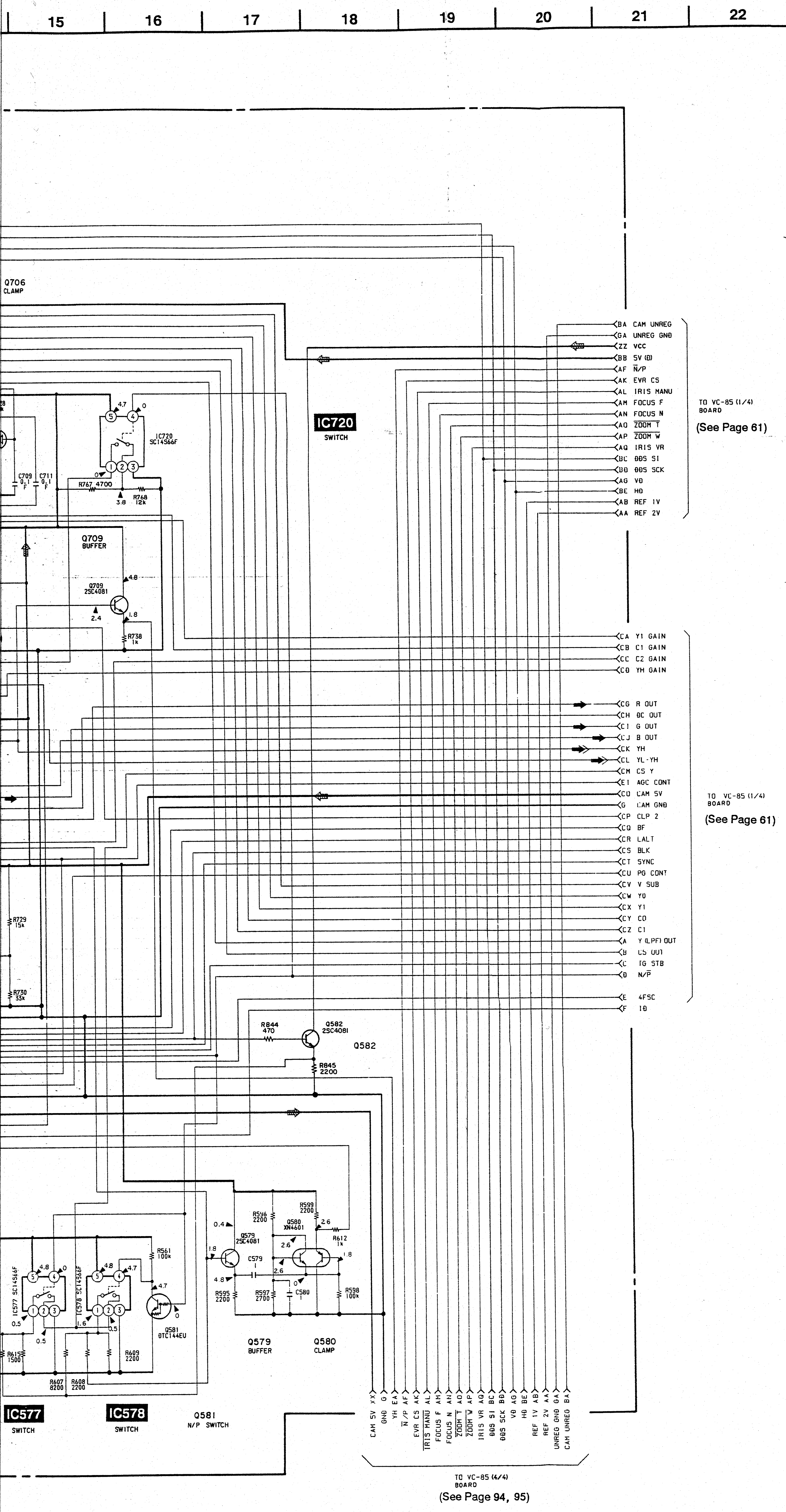
<S1>
<VSUB>
<CSOUT>
<ID>
<SYNC>
<BF>
<LALT>
<BLK>
<Y>
AF CK (4FSC) EB
WND EC
AGC CONT F EB
Yr CONT EE
IRIS OUT EF
AGC REF EG
AGC CONT R CN
PG CONT CU
V SUB CONT EH
GND G
DRIVE (+) DA
CONT (+) DB
CONT (-) DC
BIAS (+) AA
HALL (-) AB
HALL (+) DF
ZOOM T DG
ZOOM W DH
FOCUS N DI
FOCUS F DJ
FOCUS ANODE BA
FOCUS N C BL
FOCUS F C BM
CL751
CL770
CL771
CL782
CL799
CL802
R718 1000
R719 8200
R720 1200
R721 10k
R723 22k
R725 1500
R728 10k
R798 10k
R714 0
R716 1k
C706 1 16V
C707 1 F
C709 0.1 F
C711 0.1 F
C708 0.01 B
Q702 2SA1576
Q703 2SC4081
Q705 2SC4081
Q706 XN6401
Q704 2SC4081
Q574 2SC4081
R573 470
R5574 1k
R787 1k
R708 4700
C704 22p
R770 15k
R757 10k
R772 12k
R759 18k
R705 15k
R710 12k
R706 15k
R711 15k
C705 27p
R715 1k
R717 3300
R722 1k
R724 2200
R726 0
R729 15k
R730 33k
R576 3900
R575 220
R579 2200
R577 1500
R578 330
C575 0.1 F
C576 0.047 B
Q575 2SC4081
Q576 2SC4081
Q577 2SK300
D575 MA143
D576 MA110
R581 1M
C577 3900p B
R590 56k
R582 56k
R583 1M
R586 10k
R587 10k
R585 100k
R584 1M
R588 100k
R589 12k
C578 10 16V
R591 15k
R593 1M
R592 820k
R594 100k
Q578 DTC144EU
R613 100k
R614 10k
R616 10k
R615 1500
R607 8200
R608 2200
R767

TO VC-85 (4/4) BOARD
(See Page 94, 95)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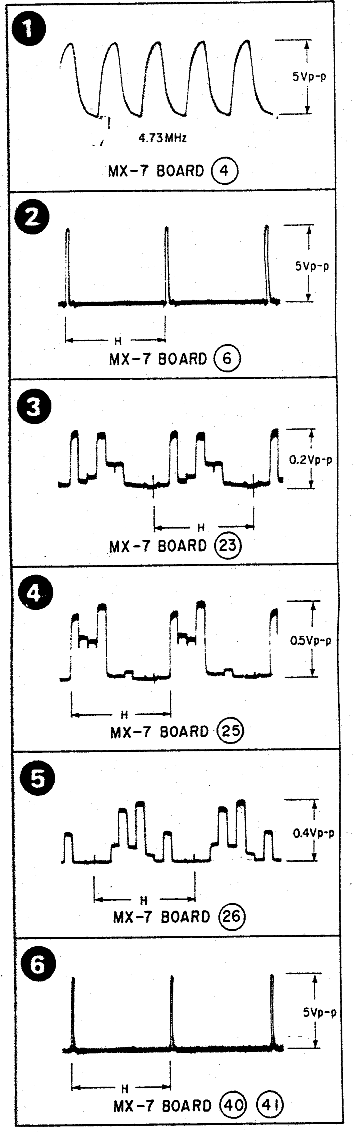
22
23
24
25
26
Q706
CLAMP
IC720
SC14566F
IC720
SWITCH
C709 0.1 F
C711 0.1 F
R767 4700
R768 12k
3.8
Q709
BUFFER
Q709
2SC4081
2.4
4.8
1.8
R738 1k
R729 15k
R730 33k
R844 470
Q582
2SC4081
Q582
R845 2200
BA CAM UNREG
GA UNREG GND
ZZ VCC
BB 5V (D)
AF N̄/P
AK EVR CS
AL IRIS MANU
AM FOCUS F
AN FOCUS N
AO ZOOM T
AP ZOOM W
AQ IRIS VR
BC 0DS SI
BD 0DS SCK
AG VD
BE HD
AB REF 1V
AA REF 2V
TO VC-85 (1/4) BOARD
(See Page 61)
CA Y1 GAIN
CB C1 GAIN
CC C2 GAIN
CD YH GAIN
CG R OUT
CH BC OUT
CI G OUT
CJ B OUT
CK YH
CL YL-YH
CM CS Y
EI AGC CONT
CO CAM 5V
G CAM GND
CP CLP 2
CQ BF
CR LALT
CS BLK
CT SYNC
CU PG CONT
CV V SUB
CW Y0
CX Y1
CY C0
CZ C1
A Y (LPF) OUT
B CS OUT
C IG STB
D N/P
E 4FSC
F ID
TO VC-85 (1/4) BOARD
(See Page 61)
IC577 SC14566F
IC578 SC14566F
IC577
SWITCH
IC578
SWITCH
R615 1500
R607 8200
R608 2200
R609 2200
R561 100k
Q581
DTC144EU
Q581
N/P SWITCH
0.5
1.6
4.8
4.7
0
R596 2200
R599 2200
Q580
XN4601
Q579
2SC4081
R612 1k
C579 1
C580 1
R595 2200
R597 2700
R598 100k
0.4
2.6
1.8
Q579
BUFFER
Q580
CLAMP
CAM 5V XX
GND G
YH EA
N̄/P AF
EVR CS AK
IRIS MANU AL
FOCUS F AM
FOCUS N AN
ZOOM T AO
ZOOM W AP
IRIS VR AQ
0DS SI BC
0DS SCK BD
VD AG
HD BE
REF 1V AB
REF 2V AA
UNREG GND GA
CAM UNREG BA
TO VC-85 (4/4) BOARD
(See Page 94, 95)

VC-85 BOARD (2/4)

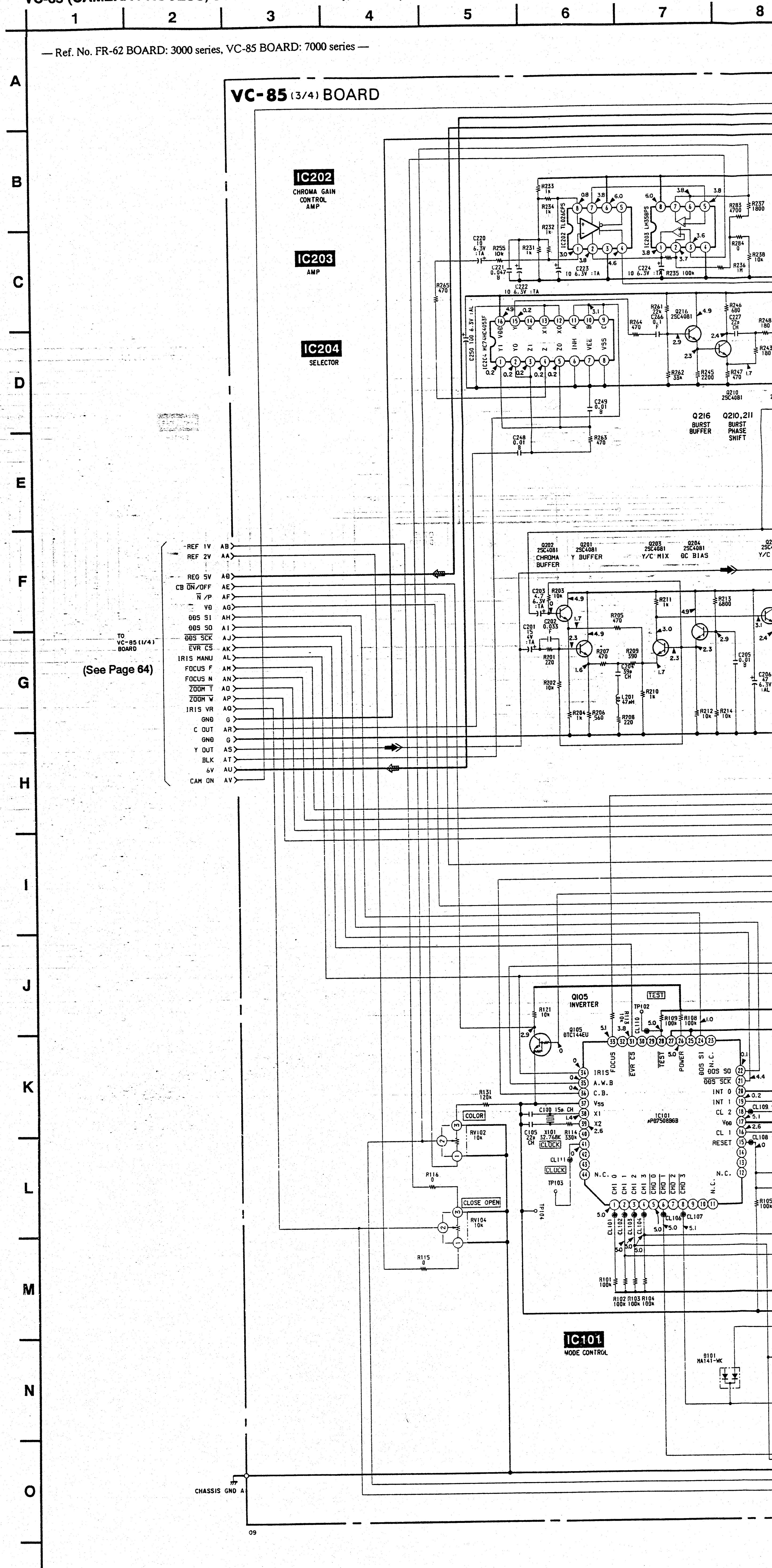


- **SIGNAL PATH**

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA/DATA	
REC	➡	➾		
PB				

VC-85 (CAMERA PROCESS, SYSTEM CONTROL), FR-62 (FLUORESCENT DISPLAY) SCHEMATIC DIAGRAMS

— Ref. No. FR-62 BOARD: 3000 series, VC-85 BOARD: 7000 series —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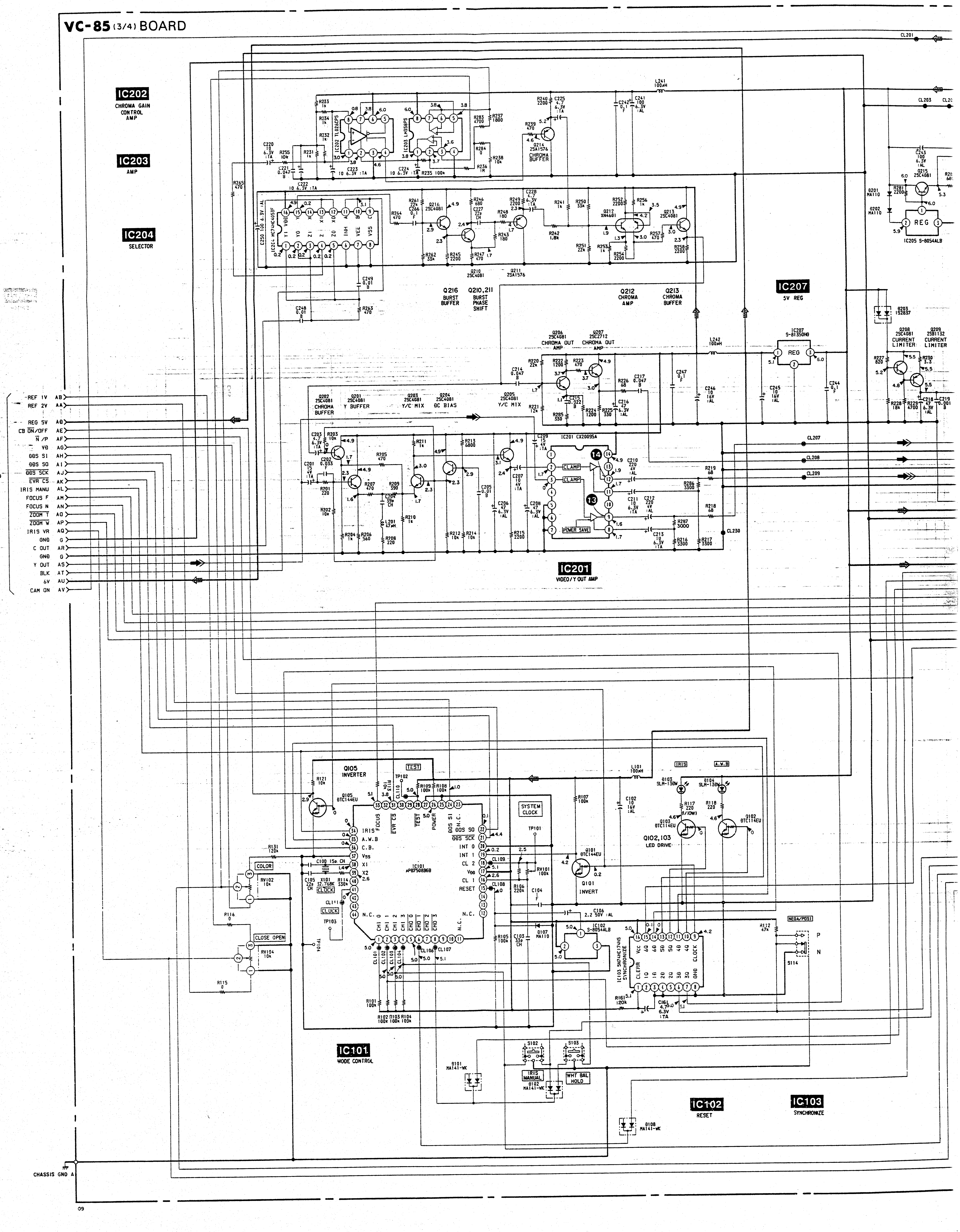
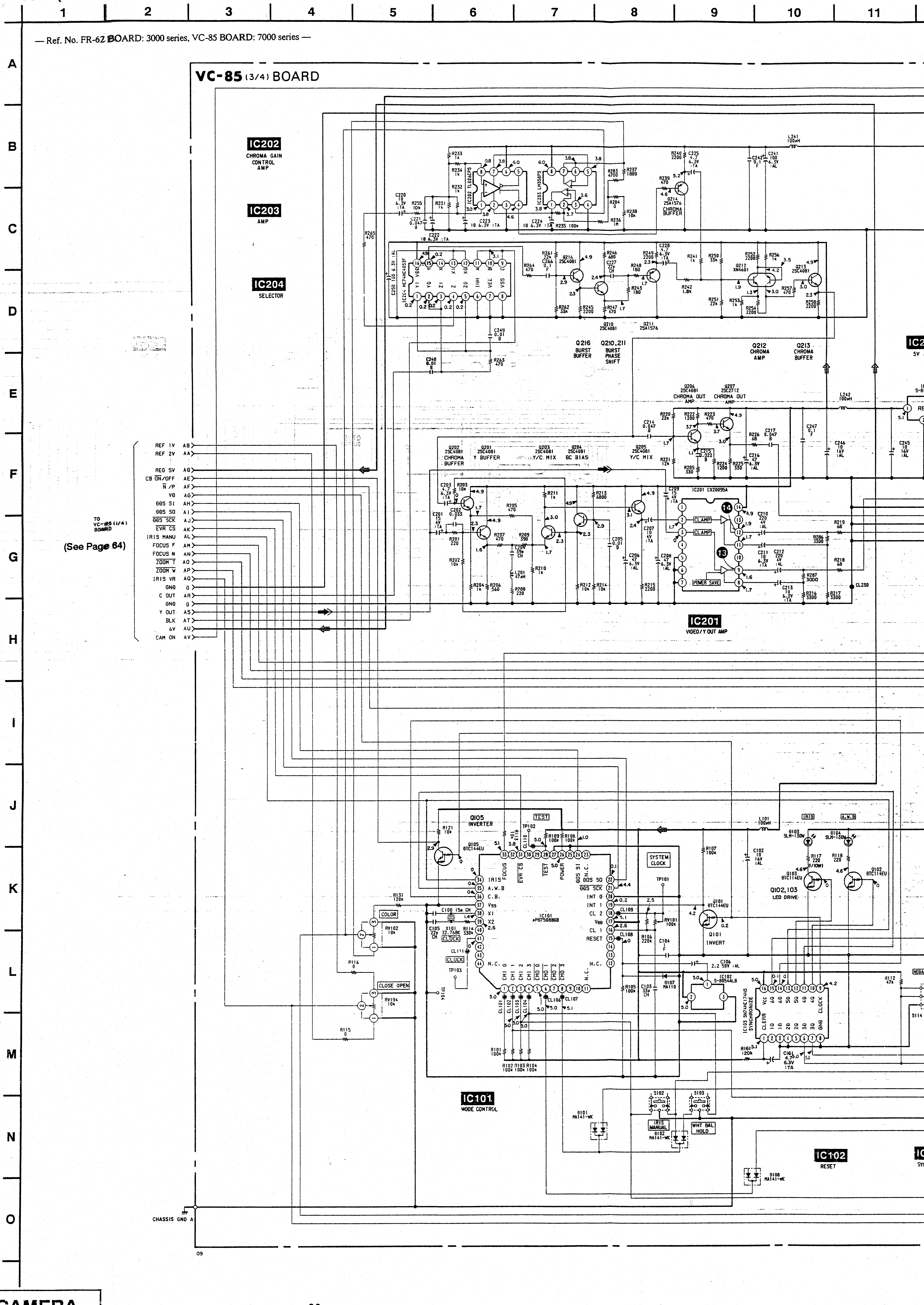
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
VC-85 (3/4) BOARD
IC202
CHROMA GAIN CONTROL AMP
IC203
AMP
IC204
SELECTOR
IC101
MODE CONTROL
TO VC-85 (1/4) BOARD
(See Page 64)
-REF 1V AB
REF 2V AA
REG 5V A8
CB ON/OFF AE
N/P AF
VD AG
DDS SI AH
DDS SO AI
DDS SCK AJ
EVR CS AK
IRIS MANU AL
FOCUS F AM
FOCUS N AN
ZOOM T AO
ZOOM W AP
IRIS VR AQ
GND G
C OUT AR
GND G
Y OUT AS
BLK AT
6V AU
CAM ON AV
CHASSIS GND A
IC202 TL026CPS
IC203 LM358PS
IC204 MC74HC4053F
Q202 2SC4081 CHROMA BUFFER
Q201 2SC4081 Y BUFFER
Q203 2SC4081 Y/C MIX
Q204 2SC4081 DC BIAS
Q216 BURST BUFFER
Q210,211 BURST PHASE SHIFT
Q105 INVERTER
Q105 DTC144EU
IC101 μPD7508B6B
D101 MA141-WK
COLOR
RV102 10k
CLOSE OPEN
RV104 10k
CLOCK
TEST
TP102
TP103
TP104
IRIS
A.W.B
C.B.
Vss
X1
X2
FOCUS
EVR CS
TEST
POWER
DDS SI
N.C.
DDS SO
DDS SCK
INT 0
INT 1
CL 2
VDD
CL 1
RESET
N.C.
CH1 0
CH1 1
CH1 2
CH1 3
CHO 0
CHO 1
CHO 2
CHO 3
09

BOARD: 3000 series, VC-85 BOARD: 7000 series —

VC-85 (3/4) BOARD


IC202 CHROMA GAIN CONTROL AMP
IC203 AMP
IC204 SELECTOR
IC207 5V REG
IC201 VIDEO/Y OUT AMP
IC101 MODE CONTROL
IC102 RESET
IC103 SYNCHRONIZE
IC202 TL026CPS
IC203 LM358PS
IC204 MC74HC4053F
IC201 CX20095A
IC101 µPD7508G
IC102 S-8054ALB
IC103 SN74HC174NS SYNCHRONIZE
IC205 S-8054ALB
IC207 S-81350HG
Q214 2SA1576 CHROMA BUFFER
Q216 BURST BUFFER
Q210,211 BURST PHASE SHIFT
Q212 CHROMA AMP
Q213 CHROMA BUFFER
Q206 2SC4081 CHROMA OUT AMP
Q207 2SC2712 CHROMA OUT AMP
Q202 2SC4081 CHROMA BUFFER
Q201 2SC4081 Y BUFFER
Q203 2SC4081 Y/C MIX
Q204 2SC4081 DC BIAS
Q205 2SC4081 Y/C MIX
Q208 2SC4081 CURRENT LIMITER
Q209 2SB1132 CURRENT LIMITER
Q105 INVERTER
Q101 INVERT
Q102,103 LED DRIVE
REF 1V AB
REF 2V AA
REG 5V AD
CB ON/OFF AE
N/P AF
V0 AG
DDS SI AH
DDS SO AI
DDS SCK AJ
EVR CS AK
IRIS MANU AL
FOCUS F AM
FOCUS N AN
ZOOM T AO
ZOOM W AP
IRIS VR AQ
GND G
C OUT AR
GND G
Y OUT AS
BLK AT
6V AU
CAM ON AV
-85 (1/4)
ge 64)
COLOR
CLOSE OPEN
CLOCK
TEST
SYSTEM CLOCK
IRIS
A.W.B
IRIS MANUAL
WHT BAL HOLD
NEGA/POSI
P
N
CLAMP
POWER SAVE
REG
CHASSIS GND A
CL201
CL203
CL207
CL208
CL209
CL230

VC-85 (CAMERA PROCESS, SYSTEM CONTROL), FR-62 (FLUORESCENT DISPLAY) SCHEMATIC DIAGRAMS



— Ref. No. FR-62 BOARD: 3000 series, VC-85 BOARD: 7000 series —

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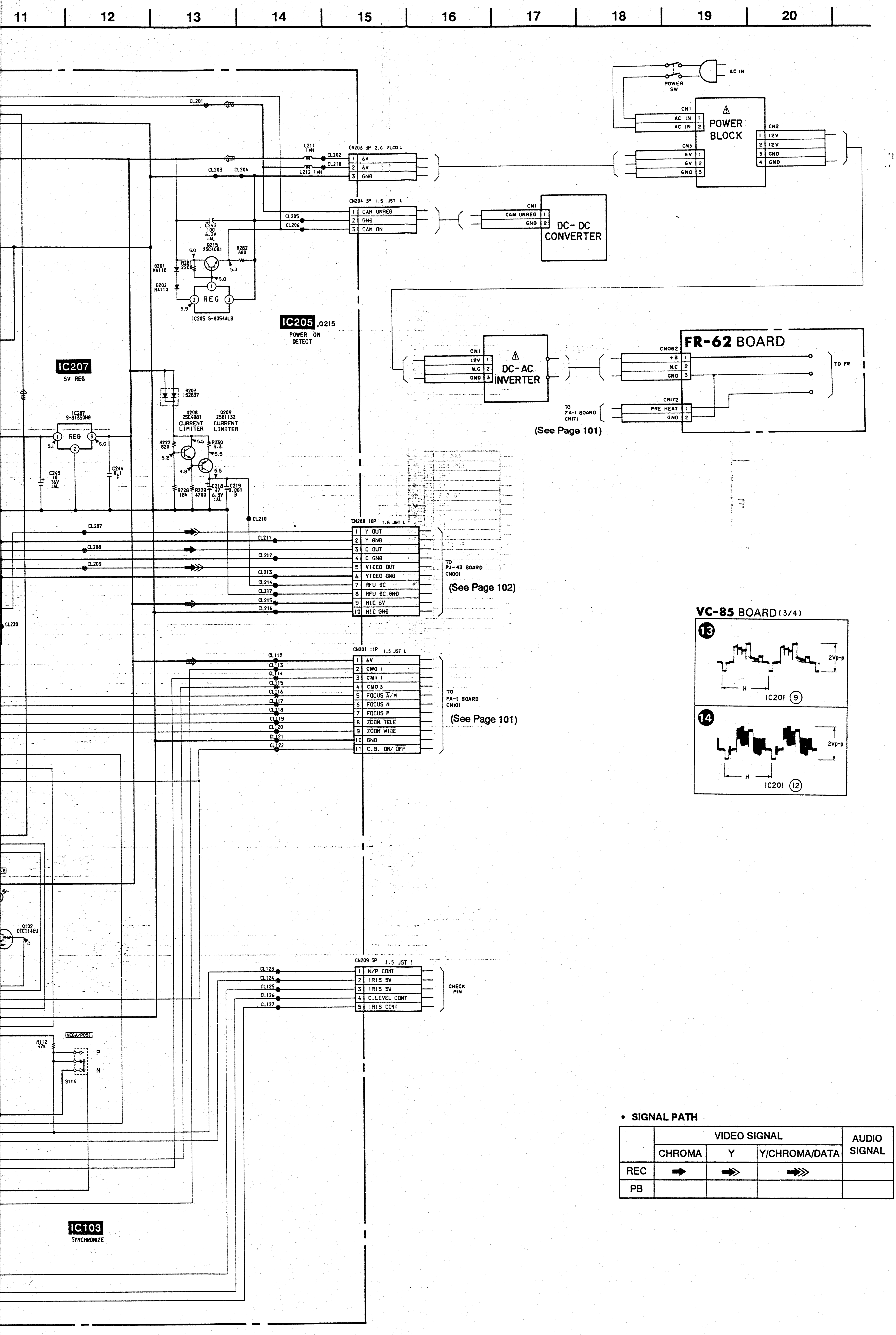
O
VC-85 (3/4) BOARD
IC202
CHROMA GAIN CONTROL AMP
IC203
AMP
IC204
SELECTOR
IC202 TL026CPS
IC203 LM358PS
IC204 HC74HC4053F
Q214 2SA1576 CHROMA BUFFER
Q216 BURST BUFFER
Q210,211 BURST PHASE SHIFT
Q212 CHROMA AMP
Q213 CHROMA BUFFER
Q206 2SC4081 CHROMA OUT AMP
Q207 2SC2712 CHROMA OUT AMP
Q202 2SC4081 CHROMA BUFFER
Q201 2SC4081 Y BUFFER
Q203 2SC4081 Y/C MIX
Q204 2SC4081 BC BIAS
Q205 2SC4081 Y/C MIX
IC201 CX20095A
CLAMP
CLAMP
POWER SAVE
IC201
VIDEO/Y OUT AMP
REF 1V AB
REF 2V AA
REG 5V AD
CB ON/OFF AE
N/P AF
VD AG
DDS SI AH
DDS SO AI
DDS SCK AJ
EVR CS AK
IRIS MANU AL
FOCUS F AM
FOCUS N AN
ZOOM T AO
ZOOM W AP
IRIS VR AQ
GND G
C OUT AR
GND G
Y OUT AS
BLK AT
6V AU
CAM ON AV
TO VC-85 (1/4) BOARD
(See Page 64)
Q105 INVERTER
TEST
TP102
SYSTEM CLOCK
TP101
IC101 μPD7508B6B
IRIS
FOCUS
EVR CS
TEST
POWER
DDS SI
N.C.
DDS SO
DDS SCK
INT 0
INT 1
CL 2
VDD
CL 1
RESET
A.W.B
C.B.
VSS
X1
X2
CH1 0
CH1 1
CH1 2
CH1 3
CHO 0
CHO 1
CHO 2
CHO 3
COLOR
RV102 10k
CLOSE OPEN
RV104 10k
CLOCK
TP103
TP104
Q101 INVERT
Q102,103 LED DRIVE
D103 SLM-13DW
D104 SLM-13DW
IRIS
A.W.B
L101 100μH
IC102 S-8054ALB
IC103 SN74HC174NS SYNCHRONIZE
CLEAR
VCC
CLOCK
GND
IC101
MODE CONTROL
D101 MA141-WK
S102
S103
IRIS MANUAL
WHT BAL HOLD
D102 MA141-WK
IC102
RESET
D108 MA141-WK
CHASSIS GND A
CL230
L241 100μH
L242 100μH
5V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AC IN
POWER SW
CN1
AC IN 1
AC IN 2
POWER BLOCK
CN2
1 12V
2 12V
3 GND
4 GND
CN3
6V 1
6V 2
GND 3
CL201
L211 1μH
L212 1μH
CL202
CL218
CL203
CL204
CN203 3P 2.0 ELCO L
1 6V
2 6V
3 GND
CN204 3P 1.5 JST L
1 CAM UNREG
2 GND
3 CAM ON
CL205
CL206
CN1
CAM UNREG 1
GND 2
DC-DC CONVERTER
C243 100 6.3V :AL
Q215 2SC4081
R282 680
D201 MA110
D202 MA110
R281 2200
6.0
5.3
5.9
REG
IC205 S-8054ALB
IC205, Q215
POWER ON DETECT
CN1
12V 1
N.C 2
GND 3
DC-AC INVERTER
TO FA-1 BOARD CN171
(See Page 101)
FR-62 BOARD
CN062
+B 1
N.C 2
GND 3
CN172
PRE HEAT 1
GND 2
TO FR
IC207
5V REG
D203 1S2837
Q208 2SC4081 CURRENT LIMITER
Q209 2SB1132 CURRENT LIMITER
IC207 S-81350HG
REG
5.1
6.0
R227 820
R228 18k
R229 4700
R230 3.3
C218 47 6.3V :AL
C219 0.001 B
C245 10 16V :AL
C244 0.1 F
5.2
4.8
5.5
CL207
CL208
CL209
CL210
CL211
CL212
CL213
CL214
CL217
CL215
CL216
CL230
CN208 10P 1.5 JST L
1 Y OUT
2 Y GND
3 C OUT
4 C GND
5 VIDEO OUT
6 VIDEO GND
7 RFU DC
8 RFU DC GND
9 MIC 6V
10 MIC GND
TO PJ-43 BOARD CN001
(See Page 102)
CL112
CL113
CL114
CL115
CL116
CL117
CL118
CL119
CL120
CL121
CL122
CN201 11P 1.5 JST L
1 6V
2 CMO I
3 CMI I
4 CMO 3
5 FOCUS A/M
6 FOCUS N
7 FOCUS F
8 ZOOM TELE
9 ZOOM WIDE
10 GND
11 C.B. ON/OFF
TO FA-1 BOARD CN101
(See Page 101)
Q102 DTC114EU
CL123
CL124
CL125
CL126
CL127
CN209 5P 1.5 JST I
1 N/P CONT
2 IRIS SW
3 IRIS SW
4 C.LEVEL CONT
5 IRIS CONT
CHECK PIN
NEGA/POSI
R112 47k
P
N
S114
IC103
SYNCHRONIZE
VC-85 BOARD (3/4)
⑬
2Vp-p
H
IC201 ⑨
⑭
2Vp-p
H
IC201 ⑫

- SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA/DATA	
REC	➡	⇛	⇛	
PB				

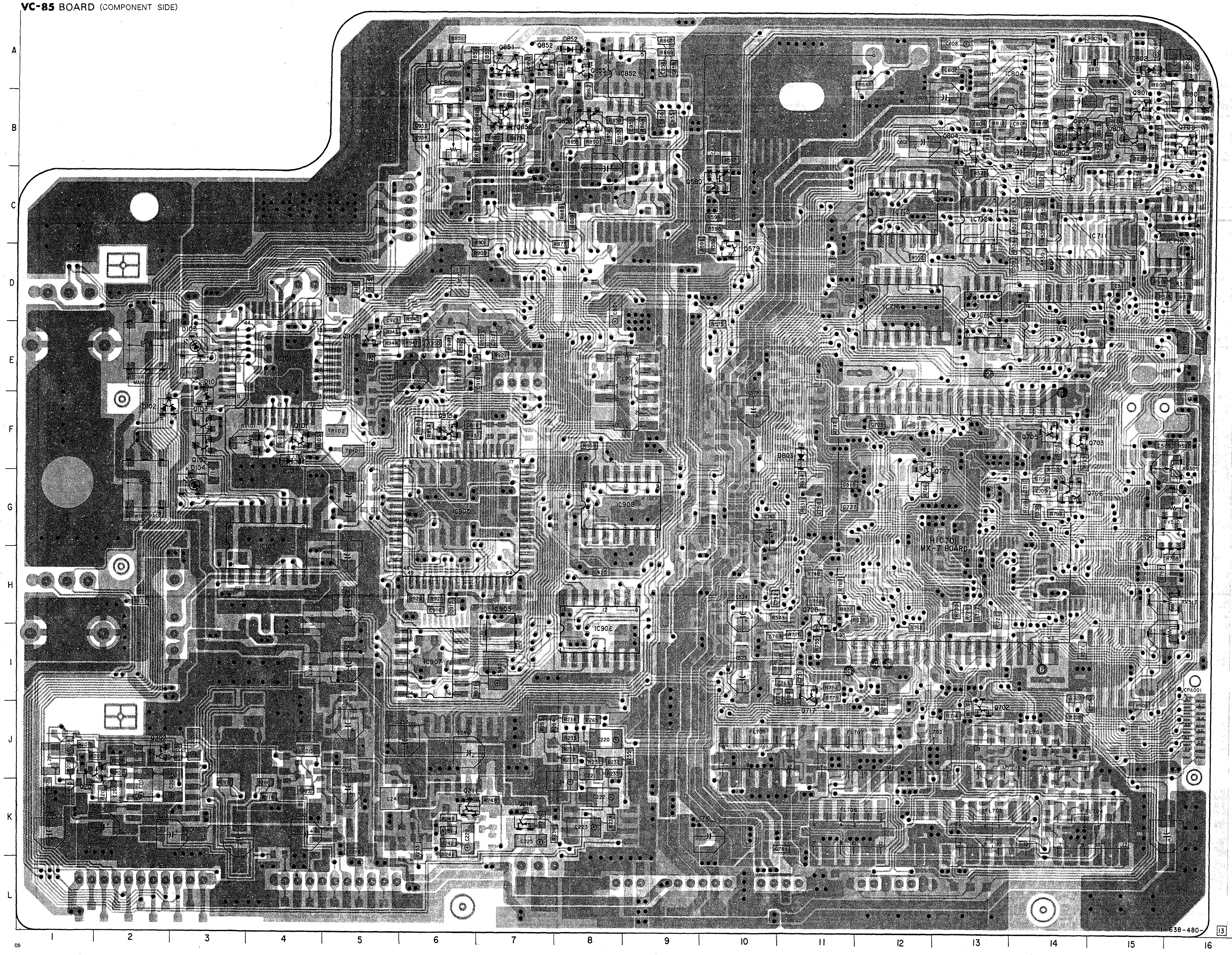
VC-85 (CAMERA PROCESS, SYSTEM CONTROL), FR-62 (FLUORESCENT DISPLAY) PRINTED WIRING BOARDS

— Ref. No. FR-62 BOARD: 3000 series, VC-85 BOARD: 7000 series —

VC-85 BOARD

D101	E-3
D102	F-2
D103	E-3
D104	G-3
D107	F-4
D108	E-29
D201	K-28
D202	K-28
D203	I-28
D575	F-22
D576	F-22
D801	A-17
D802	A-15
D803	F-11
D852	A-8
D901	H-25
D902	H-24
IC102	G-28
IC103	E-4
IC105	G-4
IC201	K-30
IC202	K-24
IC203	J-25
IC204	J-26
IC205	J-28
IC207	I-29
IC575	F-22
IC576	E-22
IC577	G-23
IC578	G-23
IC701	G-13
IC702	H-19
IC703	H-18
IC704	F-19
IC705	I-21
IC706	G-21
IC707	G-17
IC708	H-17
IC709	I-18
IC710	C-16
IC711	C-15
IC712	C-13
IC713	C-12
IC714	D-14
IC715	D-13
IC716	D-12
IC717	F-20
IC801	A-16
IC802	A-18
IC803	A-20
IC804	A-13
IC851	A-6
IC852	A-8
IC853	B-24
IC854	B-26
IC901	G-27
IC902	H-26
IC903	H-7
IC904	F-27
IC905	G-6
IC906	H-8
IC907	I-6
IC908	G-8
Q101	F-4
Q102	F-3
Q103	F-3
Q105	E-28
Q201	J-2
Q202	J-2
Q203	J-31
Q204	J-31
Q205	K-13
Q206	J-28
Q207	K-28
Q208	I-28
Q209	J-28
Q210	K-26
Q211	K-6
Q212	K-27
Q213	K-27
Q214	K-7
Q215	K-27
Q216	K-26
Q574	D-21
Q575	E-23
Q576	E-23
Q577	E-22
Q578	F-22
Q579	B-10
Q580	C-10
Q581	H-23
Q582	H-22
Q702	I-13
Q703	F-14
Q704	K-18
Q705	F-14
Q706	G-14
Q707	J-20
Q708	B-16
Q709	I-20
Q710	J-22
Q711	J-22
Q712	K-19
Q713	H-21
Q714	K-18
Q715	H-18
Q716	C-21
Q717	I-11
Q718	I-21
Q719	J-19
Q720	J-19
Q721	J-19
Q722	J-18
Q723	H-23
Q724	I-23
Q725	I-23
Q727	F-12
Q728	H-11
Q734	H-22
Q801	B-15
Q802	A-17
Q803	B-19
Q804	B-13
Q805	B-14
Q806	B-15
Q807	B-14
Q851	A-7
Q852	A-7
Q853	B-8
Q854	A-25
Q855	A-8
Q856	A-24
Q858	B-7
Q859	B-25
Q860	B-25
Q901	H-24
Q902	F-25
Q903	H-26
Q904	H-24
Q906	E-5
Q907	D-27
Q909	E-24
Q910	F-24
Q911	E-24
Q914	G-24
Q915	F-6
Q916	F-27
Q918	C-27
Q919	C-26
Q920	G-24

VC-85 BOARD (COMPONENT SIDE)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IC908
IC851
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IC804
IC710
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IC712
IC716
HIC701
MX-7 BOARD
CPA001
638-480-
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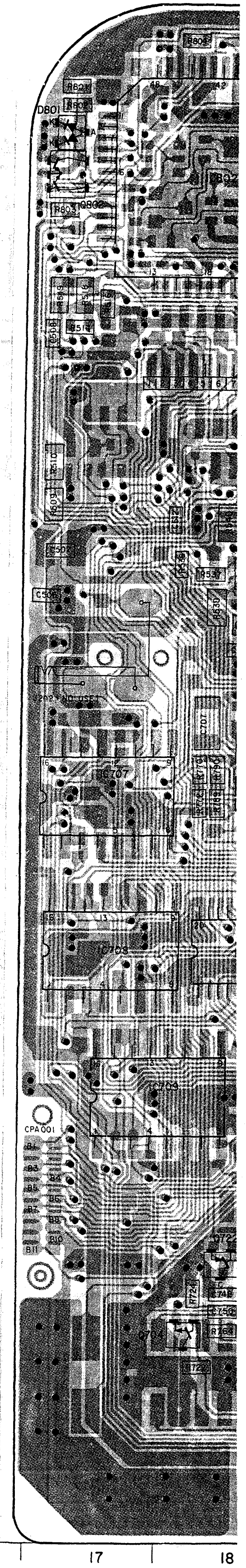
VC-85 BOARD (CONDUCT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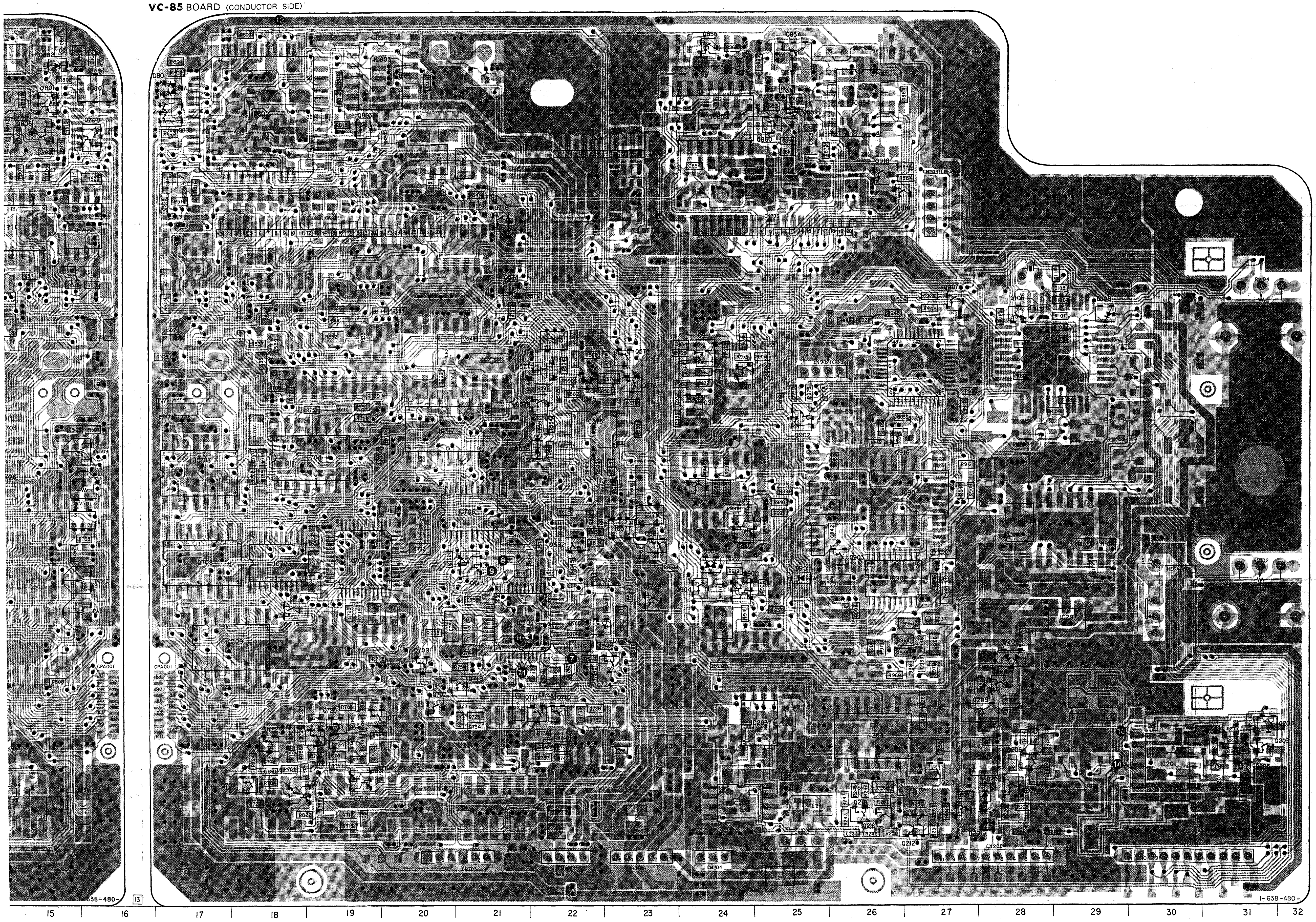
CPA001

VC-85 BOARD (CONDUCTOR SIDE)



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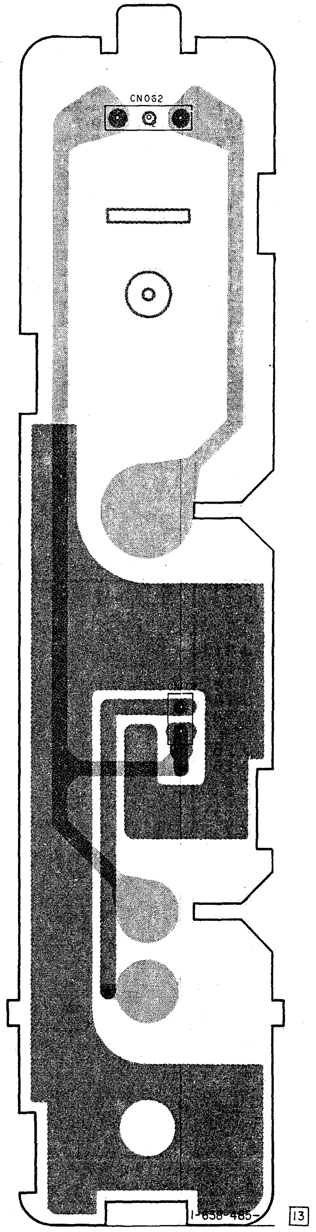
FR-62 BOARD (CONDUCTOR SIDE)



CN052
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13

D1
D1
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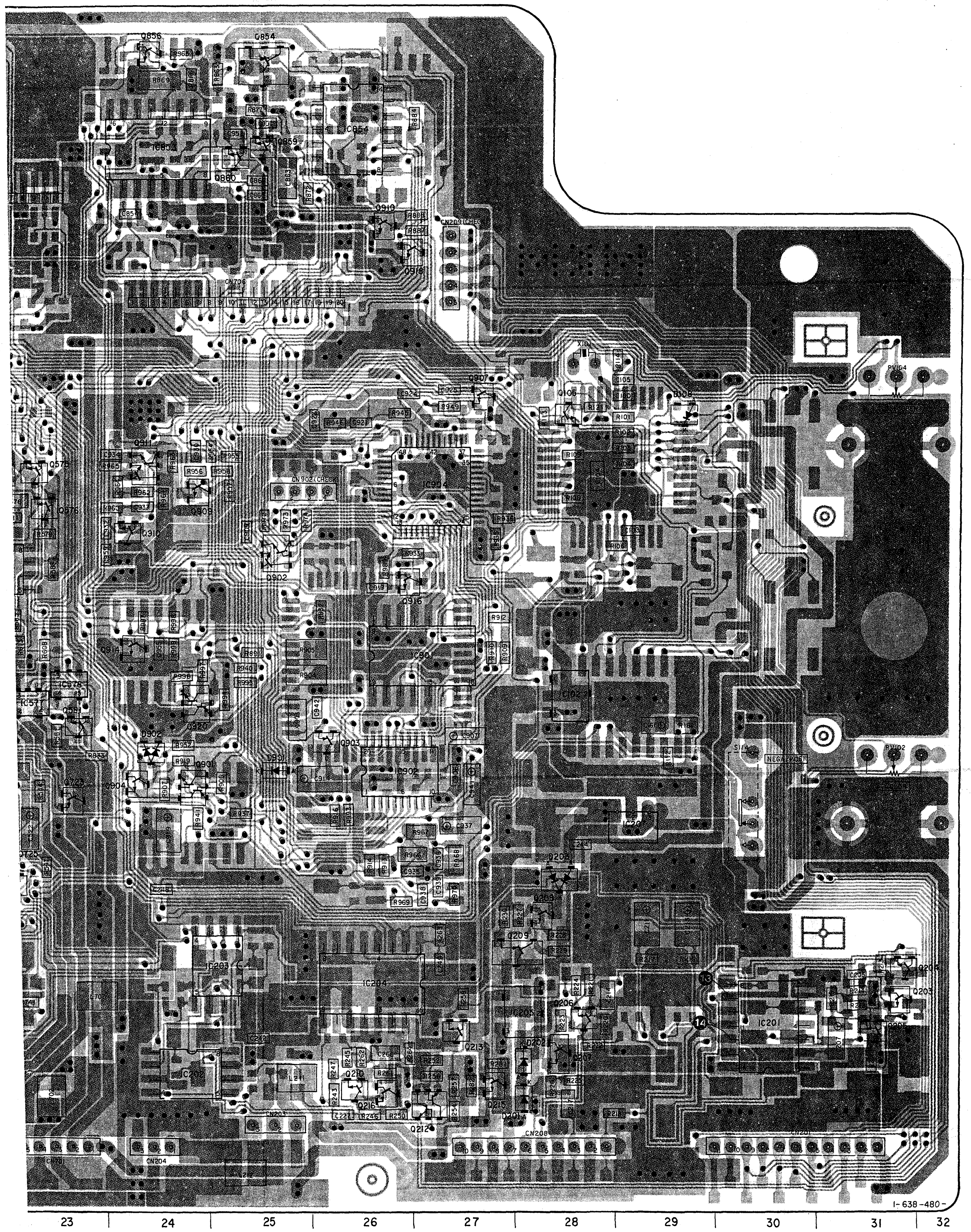
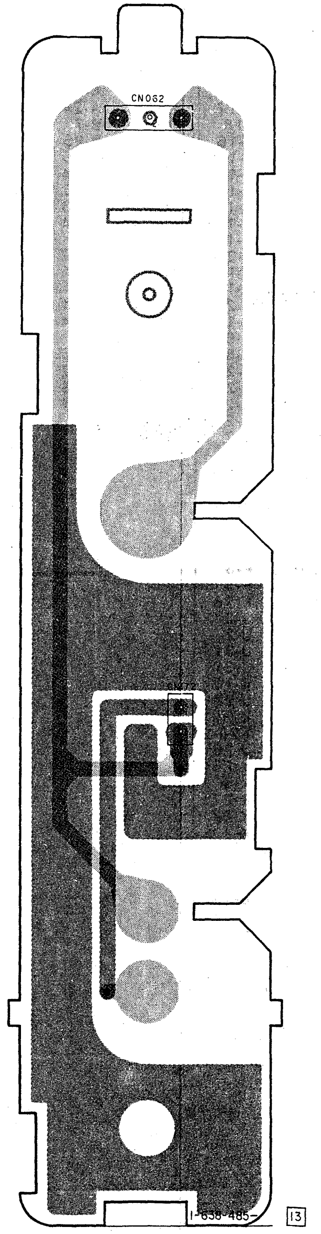
Q20



FR-62 BOARD (CONDUCTOR SIDE)



* A-7062-661-A VC-85 BOARD, COMPLETE
****
(Ref.No 7,000 Series)

< DIODE >

D101	8-719-404-35	DIODE	MA141WK
D102	8-719-404-35	DIODE	MA141WK
D103	8-719-981-33	DIODE	GL1HY-51
D104	8-719-981-33	DIODE	GL1HY-51
D107	8-719-404-46	DIODE	MA110
D108	8-719-404-35	DIODE	MA141WK
D201	8-719-404-46	DIODE	MA110
D202	8-719-404-46	DIODE	MA110
D203	8-719-400-18	DIODE	MA152WK
D575	8-719-404-52	DIODE	MA143
D576	8-719-404-46	DIODE	MA110
D801	8-719-404-32	DIODE	MA141WA
D802	8-719-404-46	DIODE	MA110
D803	8-719-404-46	DIODE	MA110
D852	8-719-404-46	DIODE	MA110
D901	8-719-404-46	DIODE	MA110
D902	8-719-404-32	DIODE	MA141WA

< IC >

IC101	8-759-152-80	IC	uPD7508BGB
IC102	8-759-937-56	IC	S-8054ALB-LM
IC103	8-759-926-28	IC	SN74HC174NS
IC201	8-752-009-51	IC	CX20095A
IC202	8-759-504-47	IC	TL026CPS
IC203	8-759-983-69	IC	LM358PS
IC204	8-759-011-65	IC	MC74HC4053F
IC205	8-759-937-56	IC	S-8054ALB-LM-S
IC207	8-759-502-36	IC	S-81350HG
IC575	8-759-983-69	IC	LM358PS
IC576	8-759-030-74	IC	SC14S66F
IC577	8-759-030-74	IC	SC14S66F
IC578	8-759-030-74	IC	SC14S66F
IC702	8-752-034-21	IC	CXA1339R
IC703	8-759-946-00	IC	MB88341PFV
IC704	8-759-300-71	IC	MC14053BF
IC705	8-752-033-34	IC	CXA1072R
IC706	8-759-946-00	IC	MB88341PFV
IC707	8-759-300-71	IC	MC14053BFP
IC708	8-759-300-71	IC	MC14053BFP
IC709	8-759-300-71	IC	MC14053BFP
IC710	8-759-100-93	IC	uPC393G2
IC711	8-759-300-71	IC	MC14053BFP
IC712	8-759-100-93	IC	uPC393G2
IC713	8-759-200-67	IC	TC4001BF
IC714	8-759-300-71	IC	MC14053BFP
IC715	8-759-100-93	IC	uPC393G2
IC716	8-759-300-71	IC	MC14053BFP
IC717	8-759-300-71	IC	MC14053BFP
IC720	8-759-234-77	IC	TC4S66F
IC801	8-759-937-56	IC	S-8054ALB-LM-S
IC802	8-759-037-60	IC	MC68HC05N4-SC406667
IC803	8-759-983-74	IC	LM324NS
IC804	8-759-008-67	IC	MC14066BF
IC851	8-759-500-11	IC	MM1036XF
IC852	8-759-983-69	IC	LM358PS
IC853	8-759-030-35	IC	MPC1725M
IC854	8-759-983-74	IC	LM324NS
IC901	8-752-334-49	IC	CXD1172AM
IC902	8-759-946-00	IC	MB88341PFV
IC903	8-759-940-45	IC	S-8054HN-CB
IC904	8-752-326-18	IC	CXD1204R
IC905	8-759-031-86	IC	MC68HC05C4-SC411531
IC906	8-759-300-71	IC	MC14053BFP
IC907	8-759-983-74	IC	LM324NS
IC908	8-759-009-06	IC	MC14052BF

< TRANSISTOR >

Q101	8-729-905-18	TRANSISTOR	DTC144EU
Q102	8-729-907-00	TRANSISTOR	DTC114EU
Q103	8-729-907-00	TRANSISTOR	DTC114EU
Q105	8-729-905-18	TRANSISTOR	DTC144EU
Q201	8-729-905-35	TRANSISTOR	2SC4081-R
Q202	8-729-905-35	TRANSISTOR	2SC4081-R
Q203	8-729-905-35	TRANSISTOR	2SC4081-R
Q204	8-729-905-35	TRANSISTOR	2SC4081-R
Q205	8-729-905-35	TRANSISTOR	2SC4081-R
Q206	8-729-905-35	TRANSISTOR	2SC4081-R
Q207	8-729-230-49	TRANSISTOR	2SC2712-YG
Q208	8-729-905-35	TRANSISTOR	2SC4081-R
Q209	8-729-106-60	TRANSISTOR	2SB1115A
Q210	8-729-905-35	TRANSISTOR	2SC4081-R
Q211	8-729-905-23	TRANSISTOR	2SA1576-R
Q212	8-729-402-84	TRANSISTOR	XN4601
Q213	8-729-905-35	TRANSISTOR	2SC4081-R
Q214	8-729-905-23	TRANSISTOR	2SA1576-R
Q215	8-729-905-35	TRANSISTOR	2SC4081-R
Q216	8-729-905-35	TRANSISTOR	2SC4081-R
Q574	8-729-905-35	TRANSISTOR	2SC4081-R
Q575	8-729-905-35	TRANSISTOR	2SC4081-R
Q576	8-729-905-35	TRANSISTOR	2SC4081-R
Q577	8-729-116-05	TRANSISTOR	2SK160
Q578	8-729-905-18	TRANSISTOR	DTC144EU
Q579	8-729-905-35	TRANSISTOR	2SC4081-R
Q580	8-729-402-84	TRANSISTOR	XN4601
Q581	8-729-905-18	TRANSISTOR	DTC144EU
Q582	8-729-905-35	TRANSISTOR	2SC4081-R
Q702	8-729-905-23	TRANSISTOR	2SA1576-R
Q703	8-729-905-35	TRANSISTOR	2SC4081-R
Q704	8-729-905-35	TRANSISTOR	2SC4081-R
Q705	8-729-905-35	TRANSISTOR	2SC4081-R
Q706	8-729-402-78	TRANSISTOR	XN6401
Q707	8-729-905-35	TRANSISTOR	2SC4081-R
Q708	8-729-403-10	TRANSISTOR	XN6215
Q709	8-729-905-35	TRANSISTOR	2SC4081-R
Q710	8-729-905-35	TRANSISTOR	2SC4081-R
Q711	8-729-905-35	TRANSISTOR	2SC4081-R
Q712	8-729-402-84	TRANSISTOR	XN4601
Q713	8-729-402-81	TRANSISTOR	XN4501
Q714	8-729-402-84	TRANSISTOR	XN4601
Q715	8-729-905-35	TRANSISTOR	2SC4081-R
Q716	8-729-905-18	TRANSISTOR	DTC144EU
Q717	8-729-905-23	TRANSISTOR	2SA1576-R
Q718	8-729-905-35	TRANSISTOR	2SC4081-R
Q719	8-729-905-35	TRANSISTOR	2SC4081-R
Q720	8-729-905-23	TRANSISTOR	2SA1576-R
Q721	8-729-905-35	TRANSISTOR	2SC4081-R
Q722	8-729-905-23	TRANSISTOR	2SA1576-R
Q723	8-729-905-35	TRANSISTOR	2SC4081-R
Q724	8-729-905-35	TRANSISTOR	2SC4081-R
Q725	8-729-907-00	TRANSISTOR	DTC114EU
Q727	8-729-905-23	TRANSISTOR	2SA1576-R
Q728	8-729-905-18	TRANSISTOR	DTC144EU
Q801	8-729-403-10	TRANSISTOR	XN6215
Q802	8-729-403-07	TRANSISTOR	XN1213
Q803	8-729-905-35	TRANSISTOR	2SC4081-R
Q804	8-729-805-42	TRANSISTOR	2SC3859
Q805	8-729-805-42	TRANSISTOR	2SC3859
Q806	8-729-805-42	TRANSISTOR	2SC3859
Q807	8-729-402-78	TRANSISTOR	XN6401
Q851	8-729-403-07	TRANSISTOR	XN1213
Q852	8-729-905-23	TRANSISTOR	2SA1576-R
Q853	8-729-402-84	TRANSISTOR	XN4601
Q854	8-729-106-60	TRANSISTOR	2SB1115A
Q855	8-729-905-35	TRANSISTOR	2SC4081-R
Q856	8-729-905-15	TRANSISTOR	DTC144WU
Q858	8-729-402-84	TRANSISTOR	XN4601
Q859	8-729-905-18	TRANSISTOR	DTC144EU
Q860	8-729-905-18	TRANSISTOR	DTC144EU
Q901	8-729-402-84	TRANSISTOR	XN4601
Q902	8-729-403-10	TRANSISTOR	XN6215
Q903	8-729-905-23	TRANSISTOR	2SA1576-R
Q904	8-729-905-18	TRANSISTOR	DTC144EU
Q906	8-729-905-35	TRANSISTOR	2SC4081-R
Q907	8-729-905-35	TRANSISTOR	2SC4081-R
Q909	8-729-905-35	TRANSISTOR	2SC4081-R
Q910	8-729-905-35	TRANSISTOR	2SC4081-R
Q911	8-729-402-19	TRANSISTOR	XN6501
Q914	8-729-905-18	TRANSISTOR	DTC144EU
Q915	8-729-905-18	TRANSISTOR	DTC144EU
Q916	8-729-905-18	TRANSISTOR	DTC144EU
Q918	8-729-905-18	TRANSISTOR	DTC144EU
Q919	8-729-905-18	TRANSISTOR	DTC144EU
Q920	8-729-402-84	TRANSISTOR	XN4601

* A-7062-661-A VC-85 BOARD, COMPLETE
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(Ref. No 7, 000 Series)

< DIODE >

D101	8-719-404-35	DIODE	MA141WK
D102	8-719-404-35	DIODE	MA141WK
D103	8-719-981-33	DIODE	GL1HY-51
D104	8-719-981-33	DIODE	GL1HY-51
D107	8-719-404-46	DIODE	MA110
D108	8-719-404-35	DIODE	MA141WK
D201	8-719-404-46	DIODE	MA110
D202	8-719-404-46	DIODE	MA110
D203	8-719-400-18	DIODE	MA152WK
D575	8-719-404-52	DIODE	MA143
D576	8-719-404-46	DIODE	MA110
D801	8-719-404-32	DIODE	MA141WA
D802	8-719-404-46	DIODE	MA110
D803	8-719-404-46	DIODE	MA110
D852	8-719-404-46	DIODE	MA110
D901	8-719-404-46	DIODE	MA110
D902	8-719-404-32	DIODE	MA141WA

< IC >

IC101	8-759-152-80	IC	uPD7508BGB
IC102	8-759-937-56	IC	S-8054ALB-LM
IC103	8-759-926-28	IC	SN74HC174NS
IC201	8-752-009-51	IC	CX20095A
IC202	8-759-504-47	IC	TL026CPS
IC203	8-759-983-69	IC	LM358PS
IC204	8-759-011-65	IC	MC74HC4053F
IC205	8-759-937-56	IC	S-8054ALB-LM-S
IC207	8-759-502-36	IC	S-81350HG
IC575	8-759-983-69	IC	LM358PS
IC576	8-759-030-74	IC	SC14S66F
IC577	8-759-030-74	IC	SC14S66F
IC578	8-759-030-74	IC	SC14S66F
IC702	8-752-034-21	IC	CXA1339R
IC703	8-759-946-00	IC	MB88341PFV
IC704	8-759-300-71	IC	MC14053BF
IC705	8-752-033-34	IC	CXA1072R
IC706	8-759-946-00	IC	MB88341PFV
IC707	8-759-300-71	IC	MC14053BFP
IC708	8-759-300-71	IC	MC14053BFP
IC709	8-759-300-71	IC	MC14053BFP
IC710	8-759-100-93	IC	uPC393G2
IC711	8-759-300-71	IC	MC14053BFP
IC712	8-759-100-93	IC	uPC393G2
IC713	8-759-200-67	IC	TC4001BF
IC714	8-759-300-71	IC	MC14053BFP
IC715	8-759-100-93	IC	uPC393G2
IC716	8-759-300-71	IC	MC14053BFP
IC717	8-759-300-71	IC	MC14053BFP
IC720	8-759-234-77	IC	TC4S66F
IC801	8-759-937-56	IC	S-8054ALB-LM-S
IC802	8-759-037-60	IC	MC68HC05N4-SC406667
IC803	8-759-983-74	IC	LM324NS
IC804	8-759-008-67	IC	MC14066BF
IC851	8-759-500-11	IC	MM1036XF
IC852	8-759-983-69	IC	LM358PS
IC853	8-759-030-35	IC	MPC1725M
IC854	8-759-983-74	IC	LM324NS
IC901	8-752-334-49	IC	CXD1172AM
IC902	8-759-946-00	IC	MB88341PFV
IC903	8-759-940-45	IC	S-8054HN-CB
IC904	8-752-326-18	IC	CXD1204R
IC905	8-759-031-86	IC	MC68HC05C4-SC411531
IC906	8-759-300-71	IC	MC14053BFP
IC907	8-759-983-74	IC	LM324NS
IC908	8-759-009-06	IC	MC14052BF

< TRANSISTOR >

Q101	8-729-905-18	TRANSISTOR	DTC144EU
Q102	8-729-907-00	TRANSISTOR	DTC114EU
Q103	8-729-907-00	TRANSISTOR	DTC114EU
Q105	8-729-905-18	TRANSISTOR	DTC144EU
Q201	8-729-905-35	TRANSISTOR	2SC4081-R
Q202	8-729-905-35	TRANSISTOR	2SC4081-R
Q203	8-729-905-35	TRANSISTOR	2SC4081-R
Q204	8-729-905-35	TRANSISTOR	2SC4081-R
Q205	8-729-905-35	TRANSISTOR	2SC4081-R
Q206	8-729-905-35	TRANSISTOR	2SC4081-R
Q207	8-729-230-49	TRANSISTOR	2SC2712-YG
Q208	8-729-905-35	TRANSISTOR	2SC4081-R
Q209	8-729-106-60	TRANSISTOR	2SB1115A
Q210	8-729-905-35	TRANSISTOR	2SC4081-R
Q211	8-729-905-23	TRANSISTOR	2SA1576-R
Q212	8-729-402-84	TRANSISTOR	XN4601
Q213	8-729-905-35	TRANSISTOR	2SC4081-R
Q214	8-729-905-23	TRANSISTOR	2SA1576-R
Q215	8-729-905-35	TRANSISTOR	2SC4081-R
Q216	8-729-905-35	TRANSISTOR	2SC4081-R
Q574	8-729-905-35	TRANSISTOR	2SC4081-R
Q575	8-729-905-35	TRANSISTOR	2SC4081-R
Q576	8-729-905-35	TRANSISTOR	2SC4081-R
Q577	8-729-116-05	TRANSISTOR	2SK160
Q578	8-729-905-18	TRANSISTOR	DTC144EU
Q579	8-729-905-35	TRANSISTOR	2SC4081-R
Q580	8-729-402-84	TRANSISTOR	XN4601
Q581	8-729-905-18	TRANSISTOR	DTC144EU
Q582	8-729-905-35	TRANSISTOR	2SC4081-R
Q702	8-729-905-23	TRANSISTOR	2SA1576-R
Q703	8-729-905-35	TRANSISTOR	2SC4081-R
Q704	8-729-905-35	TRANSISTOR	2SC4081-R
Q705	8-729-905-35	TRANSISTOR	2SC4081-R
Q706	8-729-402-78	TRANSISTOR	XN6401
Q707	8-729-905-35	TRANSISTOR	2SC4081-R
Q708	8-729-403-10	TRANSISTOR	XN6215
Q709	8-729-905-35	TRANSISTOR	2SC4081-R
Q710	8-729-905-35	TRANSISTOR	2SC4081-R
Q711	8-729-905-35	TRANSISTOR	2SC4081-R
Q712	8-729-402-84	TRANSISTOR	XN4601
Q713	8-729-402-81	TRANSISTOR	XN4501
Q714	8-729-402-84	TRANSISTOR	XN4601
Q715	8-729-905-35	TRANSISTOR	2SC4081-R
Q716	8-729-905-18	TRANSISTOR	DTC144EU
Q717	8-729-905-23	TRANSISTOR	2SA1576-R
Q718	8-729-905-35	TRANSISTOR	2SC4081-R
Q719	8-729-905-35	TRANSISTOR	2SC4081-R
Q720	8-729-905-23	TRANSISTOR	2SA1576-R
Q721	8-729-905-35	TRANSISTOR	2SC4081-R
Q722	8-729-905-23	TRANSISTOR	2SA1576-R
Q723	8-729-905-35	TRANSISTOR	2SC4081-R
Q724	8-729-905-35	TRANSISTOR	2SC4081-R
Q725	8-729-907-00	TRANSISTOR	DTC114EU
Q727	8-729-905-23	TRANSISTOR	2SA1576-R
Q728	8-729-905-18	TRANSISTOR	DTC144EU
Q801	8-729-403-10	TRANSISTOR	XN6215
Q802	8-729-403-07	TRANSISTOR	XN1213
Q803	8-729-905-35	TRANSISTOR	2SC4081-R
Q804	8-729-805-42	TRANSISTOR	2SC3859
Q805	8-729-805-42	TRANSISTOR	2SC3859
Q806	8-729-805-42	TRANSISTOR	2SC3859
Q807	8-729-402-78	TRANSISTOR	XN6401
Q851	8-729-403-07	TRANSISTOR	XN1213
Q852	8-729-905-23	TRANSISTOR	2SA1576-R
Q853	8-729-402-84	TRANSISTOR	XN4601
Q854	8-729-106-60	TRANSISTOR	2SB1115A
Q855	8-729-905-35	TRANSISTOR	2SC4081-R
Q856	8-729-905-15	TRANSISTOR	DTC144WU
Q858	8-729-402-84	TRANSISTOR	XN4601
Q859	8-729-905-18	TRANSISTOR	DTC144EU
Q860	8-729-905-18	TRANSISTOR	DTC144EU
Q901	8-729-402-84	TRANSISTOR	XN4601
Q902	8-729-403-10	TRANSISTOR	XN6215
Q903	8-729-905-23	TRANSISTOR	2SA1576-R
Q904	8-729-905-18	TRANSISTOR	DTC144EU
Q906	8-729-905-35	TRANSISTOR	2SC4081-R
Q907	8-729-905-35	TRANSISTOR	2SC4081-R
Q909	8-729-905-35	TRANSISTOR	2SC4081-R
Q910	8-729-905-35	TRANSISTOR	2SC4081-R
Q911	8-729-402-19	TRANSISTOR	XN6501
Q914	8-729-905-18	TRANSISTOR	DTC144EU
Q915	8-729-905-18	TRANSISTOR	DTC144EU
Q916	8-729-905-18	TRANSISTOR	DTC144EU
Q918	8-729-905-18	TRANSISTOR	DTC144EU
Q919	8-729-905-18	TRANSISTOR	DTC144EU
Q920	8-729-402-84	TRANSISTOR	XN4601

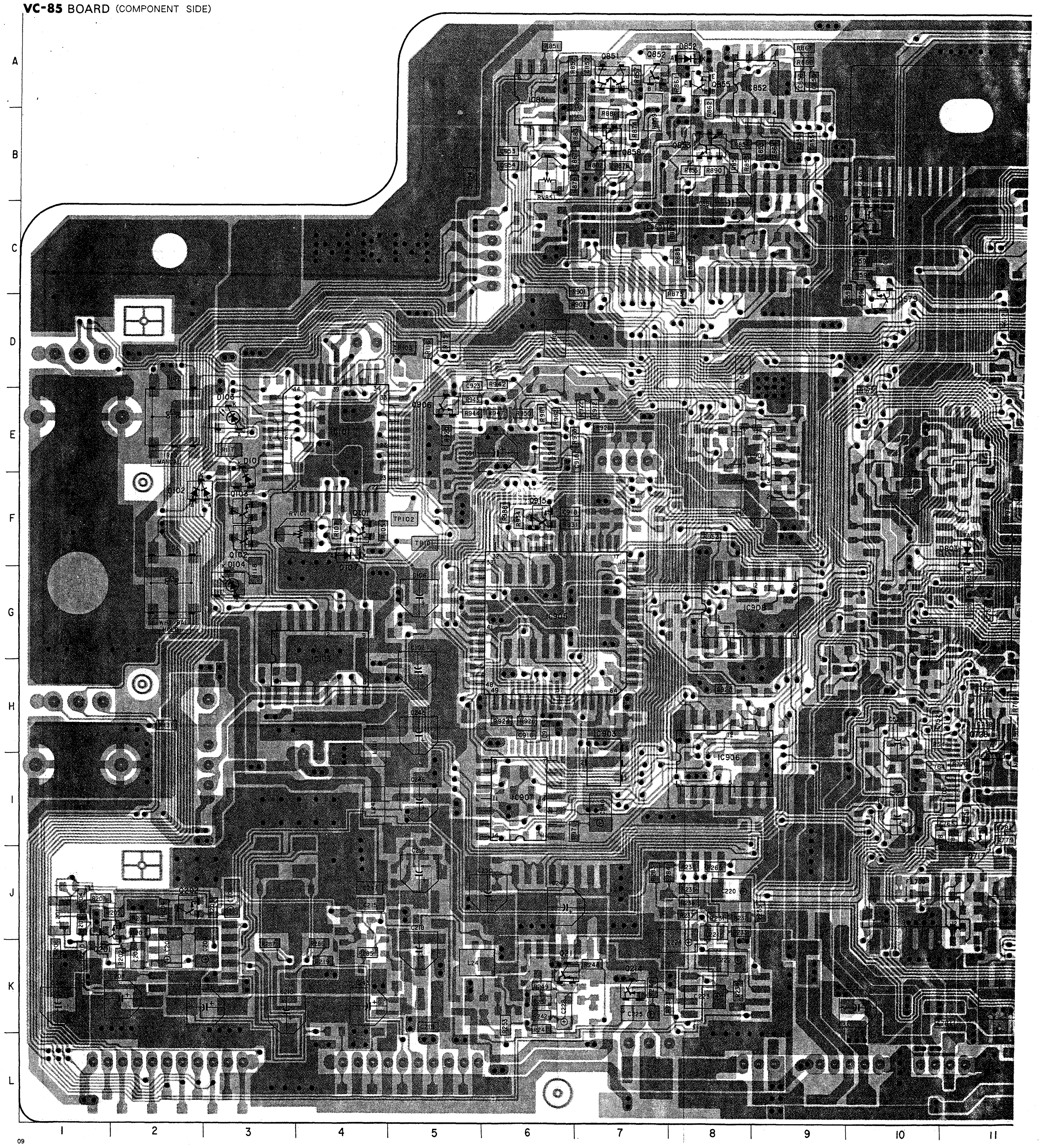
VC-85 (CAMERA PROCESS, SYSTEM CONTROL), FR-62 (FLUORESCENT DISPLAY) PRINTED WIRING BOARDS

— Ref. No. FR-62 BOARD: 3000 series, VC-85 BOARD: 7000 series —

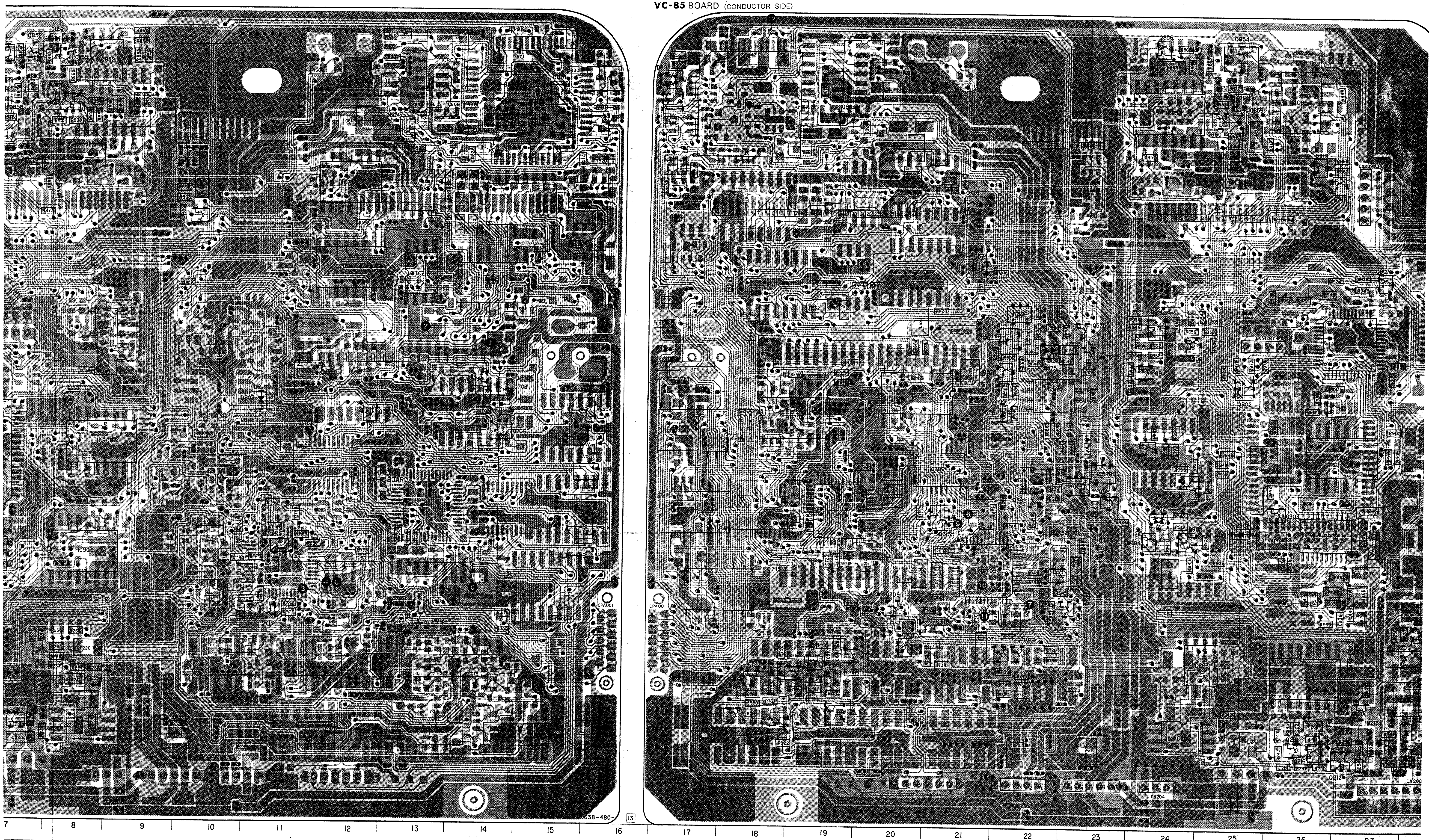
VC-85 BOARD

D101	E-3
D102	F-2
D103	E-3
D104	G-3
D107	F-4
D108	E-29
D201	K-28
D202	K-28
D203	I-28
D575	F-22
D576	F-22
D801	A-17
D802	A-15
D803	F-11
D852	A-8
D901	H-25
D902	H-24
IC102	G-28
IC103	E-4
IC105	G-4
IC201	K-30
IC202	K-24
IC203	J-25
IC204	J-26
IC205	J-28
IC207	I-29
IC575	F-22
IC576	E-22
IC577	G-23
IC578	G-23
IC701	G-13
IC702	H-19
IC703	H-18
IC704	F-19
IC705	I-21
IC706	G-21
IC707	G-17
IC708	H-17
IC709	I-18
IC710	C-16
IC711	C-15
IC712	C-13
IC713	C-12
IC714	D-14
IC715	D-13
IC716	D-12
IC717	F-20
IC801	A-16
IC802	A-18
IC803	A-20
IC804	A-13
IC851	A-6
IC852	A-8
IC853	B-24
IC854	B-26
IC901	G-27
IC902	H-26
IC903	H-7
IC904	F-27
IC905	G-6
IC906	H-8
IC907	I-6
IC908	G-8
Q101	F-4
Q102	F-3
Q103	F-3
Q105	E-28
Q201	J-2
Q202	J-2
Q203	J-31
Q204	J-31
Q205	K-13
Q206	J-28
Q207	K-28
Q208	I-28
Q209	J-28
Q210	K-26
Q211	K-6
Q212	K-27
Q213	K-27
Q214	K-7
Q215	K-27
Q216	K-26
Q574	D-21
Q575	E-23
Q576	E-23
Q577	E-22
Q578	F-22
Q579	B-10
Q580	C-10
Q581	H-23
Q582	H-22
Q702	I-13
Q703	F-14
Q704	K-18
Q705	F-14
Q706	G-14
Q707	J-20
Q708	B-16
Q709	I-20
Q710	J-22
Q711	J-22
Q712	K-19
Q713	H-21
Q714	K-18
Q715	H-18
Q716	C-21
Q717	I-11
Q718	I-21
Q719	J-19
Q720	J-19
Q721	J-19
Q722	J-18
Q723	H-23
Q724	I-23
Q725	I-23
Q727	F-12
Q728	H-11
Q734	H-22
Q801	B-15
Q802	A-17
Q803	B-19
Q804	B-13
Q805	B-14
Q806	B-15
Q807	B-14
Q851	A-7
Q852	A-7
Q853	B-8
Q854	A-25
Q855	A-8
Q856	A-24
Q858	B-7
Q859	B-25
Q860	B-25
Q901	H-24
Q902	F-25
Q903	H-26
Q904	H-24
Q906	E-5
Q907	D-27
Q909	E-24
Q910	F-24
Q911	E-24
Q914	G-24
Q915	F-6
Q916	F-27
Q918	C-27
Q919	C-26
Q920	G-24

VC-85 BOARD (COMPONENT SIDE)



VC-85 BOARD (CONDUCTOR SIDE)



IC906
IC908
Q852
Q856
Q854
CPA001
13
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8
9
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11
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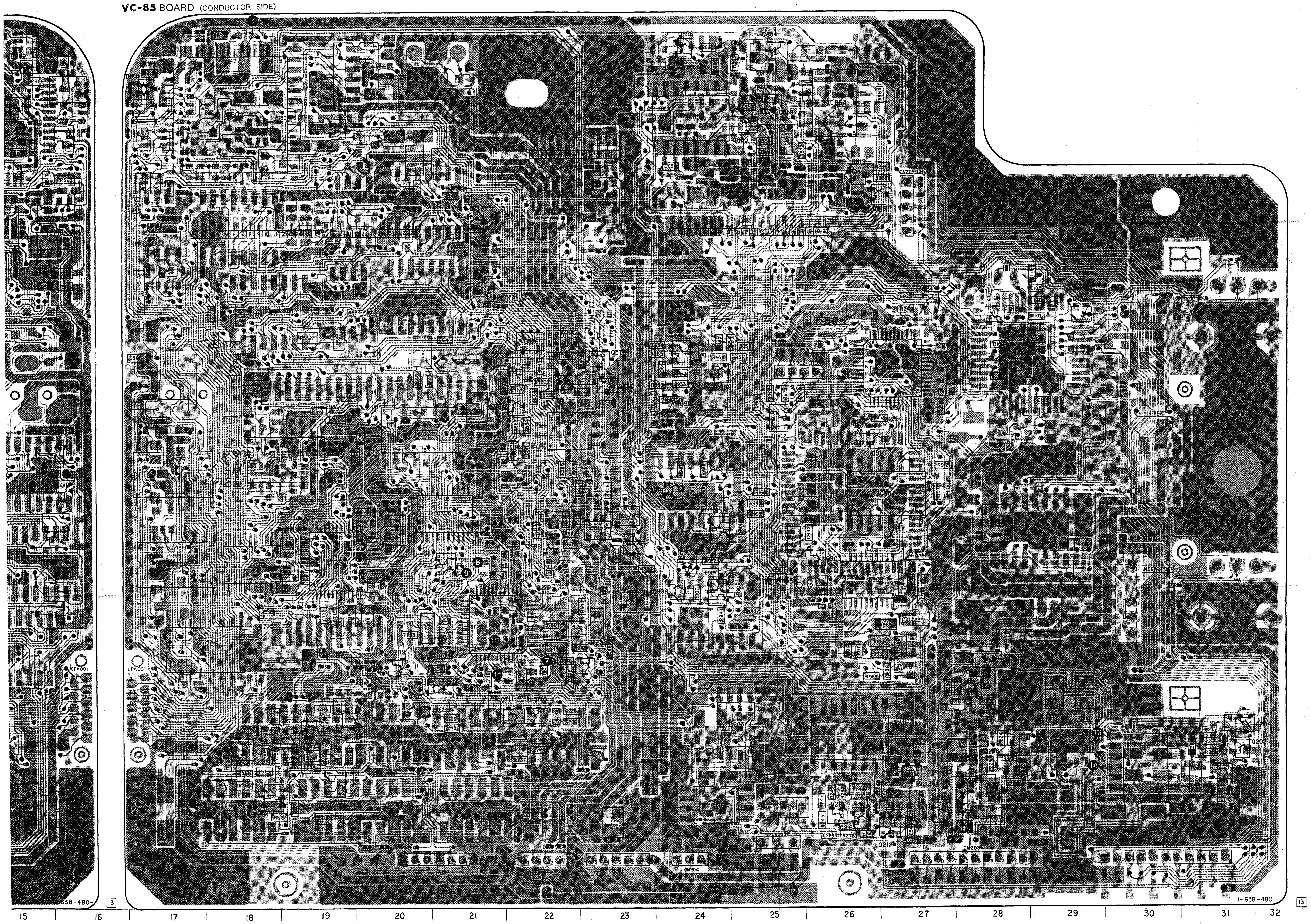
27

VC-85 BOARD (CONDUCTOR SIDE)


1-638-480-
13
1-638-480-
13
CPA001
CN204
CN208
IC201
IC202
Q203
Q204
Q205
RV102
RV104
NEGA/POSI
15
16
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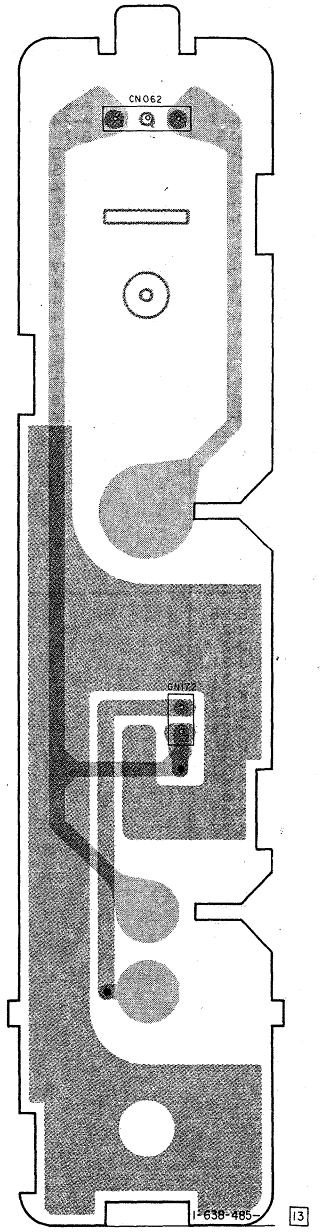
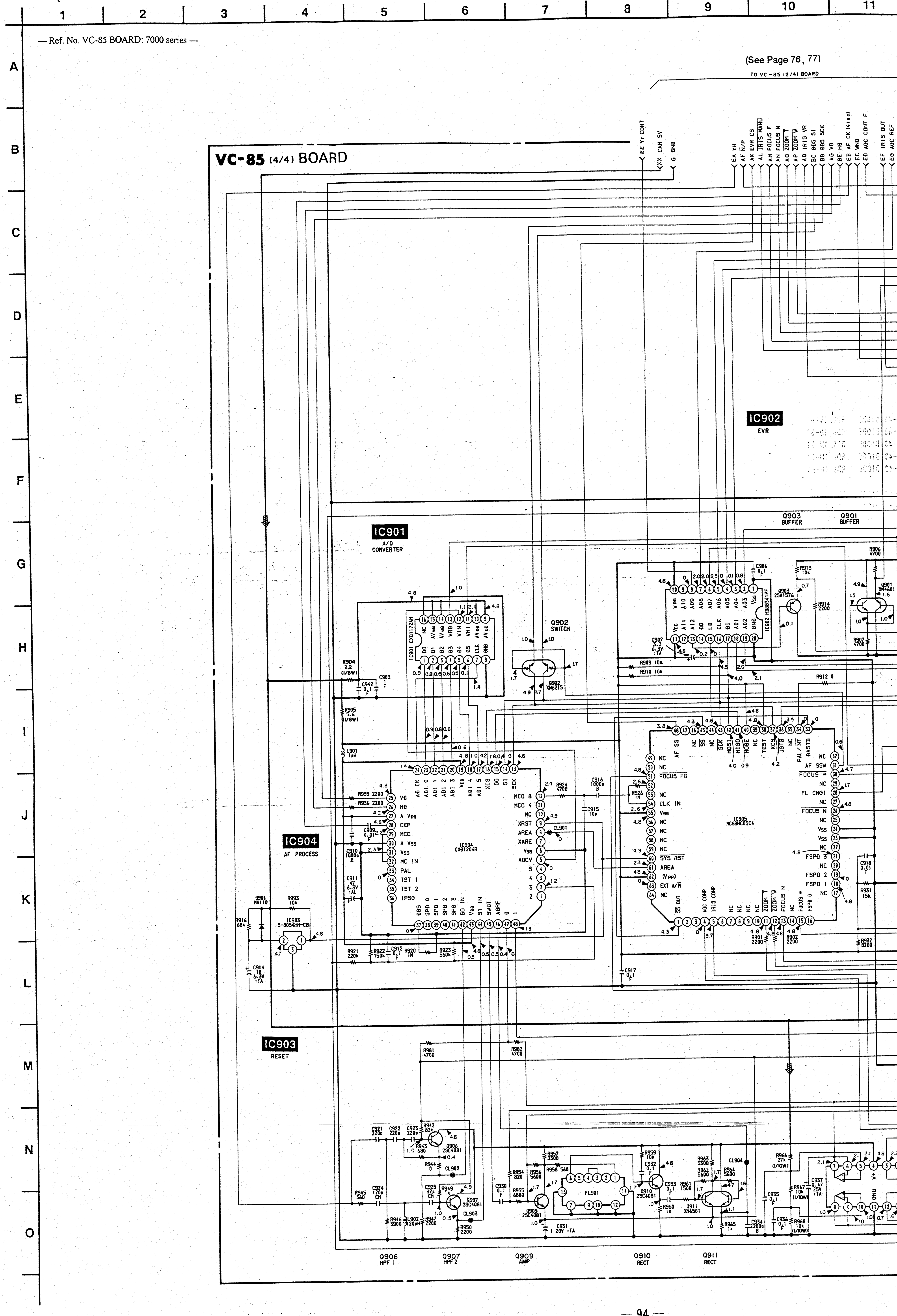
32

FR-62 BOARD (CONDUCTOR SIDE)


CN062
1-638-485-
13

VC-85 (CAMERA PROCESS, SYSTEM CONTROL) SCHEMATIC DIAGRAM

— Ref. No. VC-85 BOARD: 7000 series —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9
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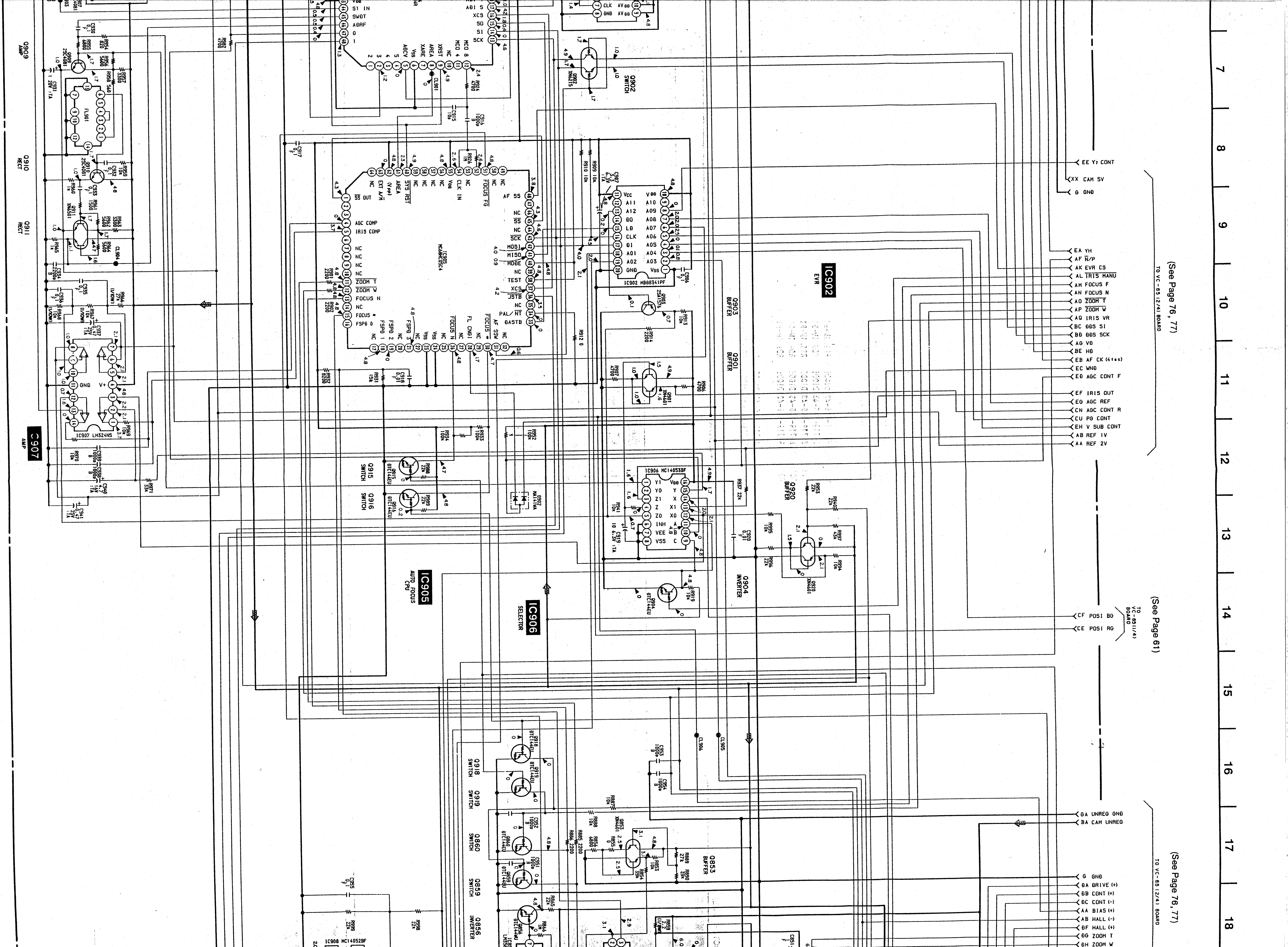
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
(See Page 76, 77)
TO VC-85 (2/4) BOARD
VC-85 (4/4) BOARD
EE Y1 CONT
XX CAM 5V
G GND
EA YH
AF N/P
AK EVR CS
AL IRIS MANU
AM FOCUS F
AN FOCUS N
AO ZOOM T
AP ZOOM W
AQ IRIS VR
BC ØDS SI
BD ØDS SCK
AG VD
BE HD
EB AF CK (4fsc)
EC WND
ED AGC CONT F
EF IRIS OUT
EG AGC REF
IC902
EVR
IC901
A/D CONVERTER
IC901 CXD1172AM
Q902
SWITCH
Q902 XN6215
Q903 BUFFER
Q901 BUFFER
Q903 2SA1576
Q901 XN4601
IC902 MB88341PF
IC904
AF PROCESS
IC904 CXD1204R
IC905 MC68HC05C4
IC903
RESET
IC903 S-8054HN-CB
D901 MA110
FL901
Q906 HPF 1
Q907 HPF 2
Q909 AMP
Q910 RECT
Q911 RECT
Q906 2SC4081
Q907 2SC4081
Q909 2SC4081
Q910 2SC4081
Q911 XN6501


IC902
EVR
IC902 MB88341PF
IC905
AUTO FOCUS CPU
IC905 MC68HC05C4
IC906
SELECTOR
IC906 MC14053BF
IC907
AMP
IC907 LH324NS
IC908 MC14052BF
FL901
Q909 AMP
Q910 RECT
Q911 RECT
Q902 SWITCH
Q903 BUFFER
Q901 BUFFER
Q920 BUFFER
Q904 INVERTER
Q915 SWITCH
Q916 SWITCH
Q918 SWITCH
Q919 SWITCH
Q860 SWITCH
Q859 SWITCH
Q856 INVERTER
Q853 BUFFER
EE Y7 CONT
XX CAM 5V
G GND
EA YH
AF N/P
AK EVR CS
AL IRIS MANU
AM FOCUS F
AN FOCUS N
AO ZOOM T
AP ZOOM W
AQ IRIS VR
BC BOS SI
BD BOS SCK
AG VD
BE HD
EB AF CK (4fsc)
EC WND
ED AGC CONT F
EF IRIS OUT
EG AGC REF
CN AGC CONT R
CU PO CONT
EH V SUB CONT
AB REF 1V
AA REF 2V
(See Page 76, 77)
TO VC-85 (2/4) BOARD
CF POSI BG
CE POSI RG
TO VC-85(1/4) BOARD
(See Page 61)
GA UNREG GND
BA CAM UNREG
G GND
BA DRIVE (+)
BB CONT (+)
BC CONT (-)
AA BIAS (+)
AB HALL (-)
BF HALL (+)
BG ZOOM T
BH ZOOM W
(See Page 76, 77)
TO VC-85 (2/4) BOARD
7
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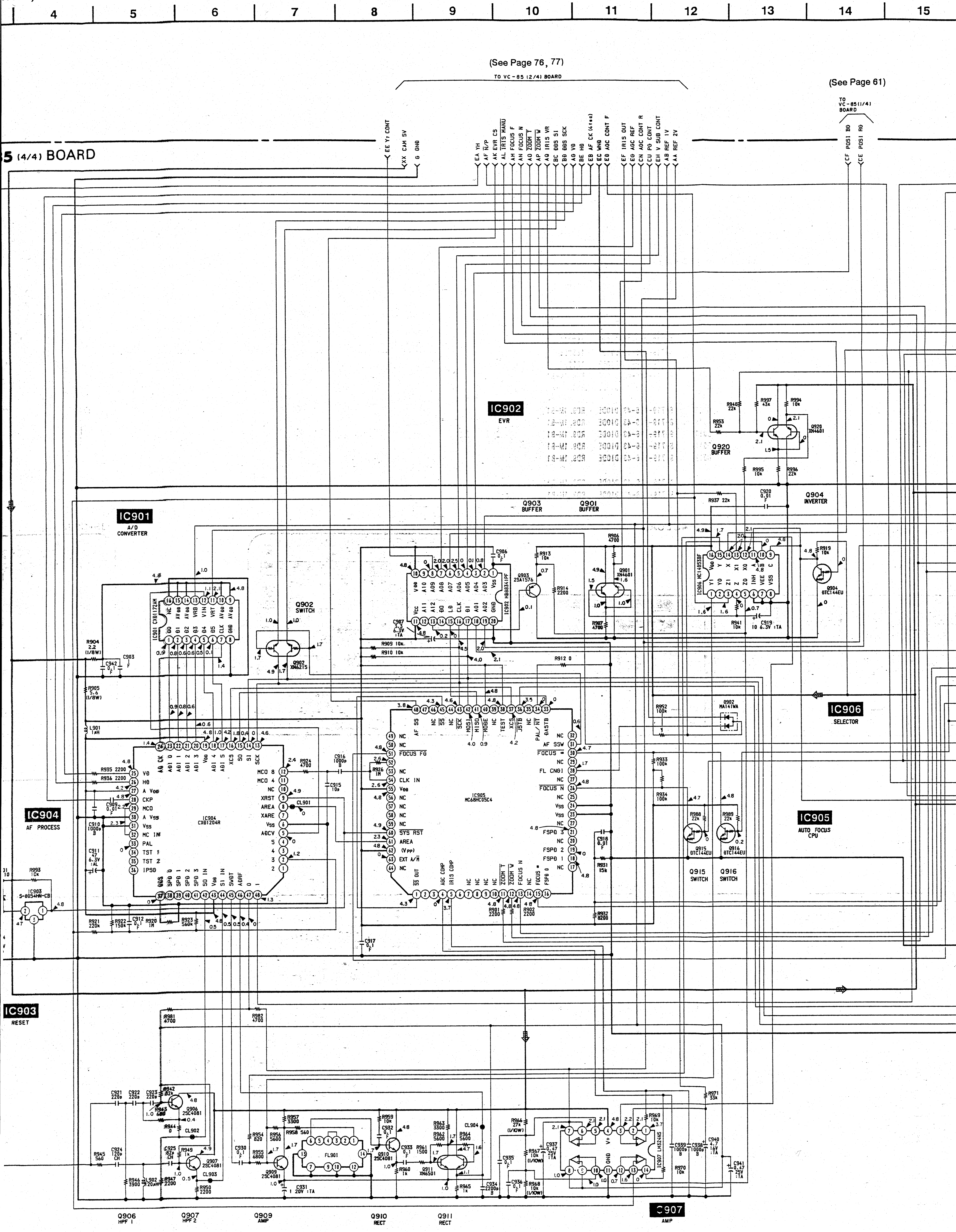
TROL) SCHEMATIC DIAGRAM

5 (4/4) BOARD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12
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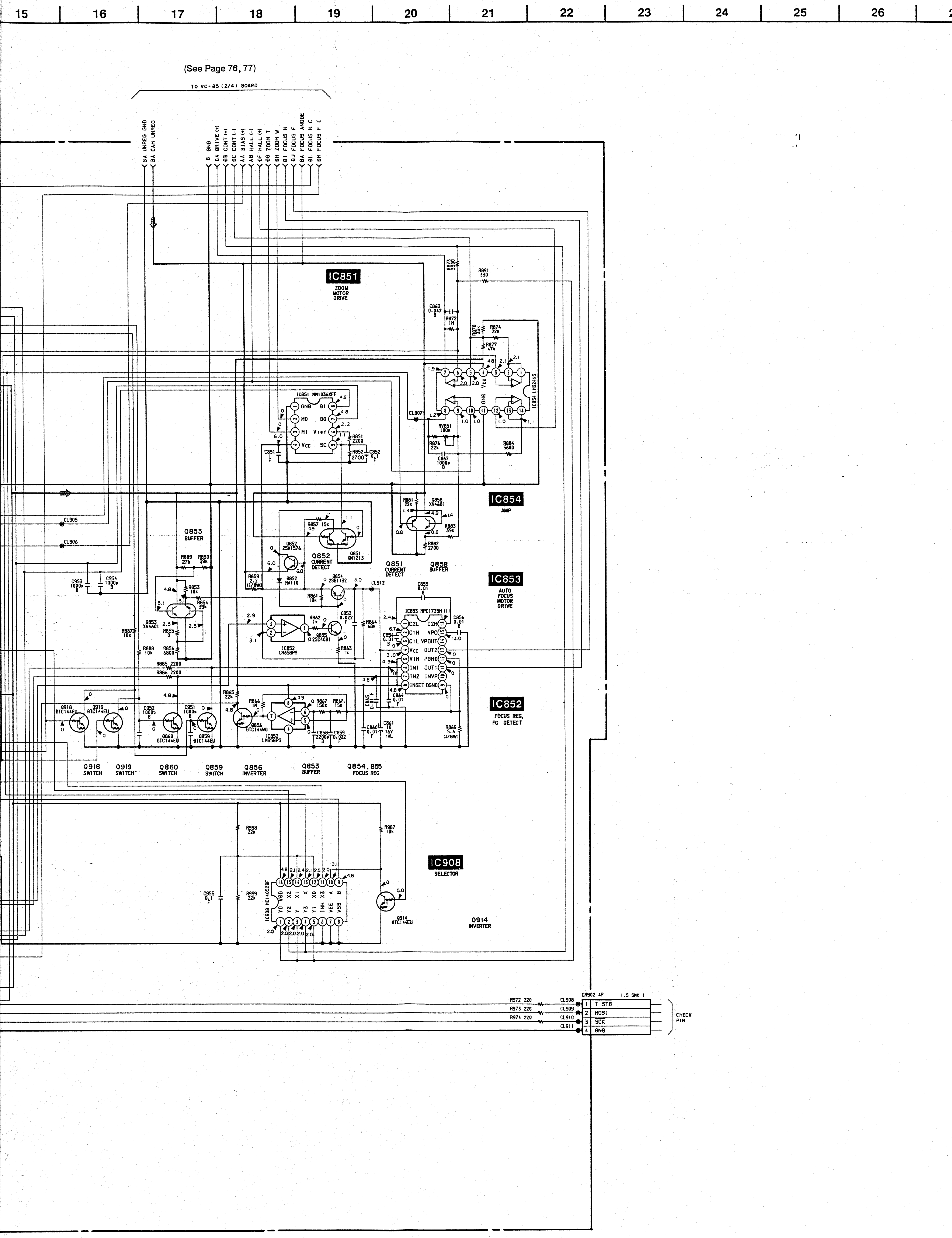
14
15
(See Page 76, 77)
TO VC-85 (2/4) BOARD
(See Page 61)
TO VC-85(1/4) BOARD
EE Y1 CONT
XX CAM 5V
G GND
EA YH
AF N/P
AK EVR CS
AL IRIS MANU
AM FOCUS F
AN FOCUS N
AO ZOOM T
AP ZOOM W
AQ IRIS VR
BC DDS SI
BD DDS SCK
AG VD
BE HD
EB AF CK (4fsc)
EC WND
ED AGC CONT F
EF IRIS OUT
EG AGC REF
CN AGC CONT R
CU PG CONT
EH V SUB CONT
AB REF 1V
AA REF 2V
CF POSI BG
CE POSI RG
IC901
A/D CONVERTER
IC901 CX01172AM
IC902
EVR
IC902 MB88341PF
IC903
RESET
IC903 S-8054HN-CB
IC904
AF PROCESS
IC904 CX01204R
IC905
AUTO FOCUS CPU
IC905 MC68HC05C4
IC906
SELECTOR
IC906 MC14053BF
IC907
AMP
IC907 LM324NS
Q901
BUFFER
Q901 XN4601
Q902
SWITCH
Q902 XN6215
Q903
BUFFER
Q903 2SA1576
Q904
INVERTER
Q904 DTC144EU
Q906
HPF 1
Q906 2SC4081
Q907
HPF 2
Q907 2SC4081
Q909
AMP
Q909 2SC4081
Q910
RECT
Q910 2SC4081
Q911
RECT
Q911 XN6501
Q915
SWITCH
Q915 DTC144EU
Q916
SWITCH
Q916 DTC144EU
Q920
BUFFER
Q920 XN4601
D902 MA141WA
FL901
CL901
CL902
CL903
CL904
L901 1mH
L902 120μH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16
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18
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21
22
23
24
25
26
(See Page 76, 77)
TO VC-85 (2/4) BOARD
GA UNREG GND
BA CAM UNREG
G GND
BA DRIVE (+)
BB CONT (+)
BC CONT (-)
AA BIAS (+)
AB HALL (-)
DF HALL (+)
BG ZOOM T
BH ZOOM W
DI FOCUS N
DJ FOCUS F
BA FOCUS ANODE
BL FOCUS N C
BM FOCUS F C
IC851
ZOOM MOTOR DRIVE
IC851 MM1036XFF
GND
MO
MI
Vcc
01
00
Vref
SC
C851 1 F
R851 2200
R852 2700
C852 0.1 F
IC854
AMP
IC854 LM324N5
VDD
GND
R873 3300
R891 330
C863 0.047 B
R872 1M
R878 33k
R874 22k
R877 47k
RV851 100k
R876 22k
C867 1000p B
R884 5600
CL907
Q858 XN4601
R881 22k
R883 39k
R882 2700
Q858 BUFFER
Q851 CURRENT DETECT
Q851 XN1213
R857 15k
Q852 2SA1576
Q852 CURRENT DETECT
Q852 MA110
R859 2.2 (1/8W)
Q853 BUFFER
R889 27k
R890 39k
R853 10k
R854 39k
Q853 XN4601
R855 0
R887 10k
R888 10k
R856 6800
R885 2200
R886 2200
C953 1000p B
C954 1000p B
CL905
CL906
Q854 2SB1132
CL912
R861 10k
R862 1k
C853 0.022 F
R864 68k
Q855 2SC4081
R863 1k
IC852 LM358PS
IC853
AUTO FOCUS MOTOR DRIVE
IC853 MPC1725H(1)
C855 0.01 B
C856 0.01 B
C854 0.01 B
C2L
C1H
C1L
Vcc
VIN
IN1
IN2
INSET
C2H
VPC
VPOUT
OUT2
PGND
OUT1
INVP
DGND
IC852
FOCUS REG, FG DETECT
C865 0.01 F
C864 0.01 F
C861 10 16V :AL
C860 0.01 F
R869 5.6 (1/8W)
R865 22k
R866 1M
R867 150k
R868 15k
C858 2200p B
C859 0.022 F
Q856 DTC144WU
IC852 LM358PS
Q918 DTC144EU
Q919 DTC144EU
C952 1000p B
C951 1000p B
Q860 DTC144EU
Q859 DTC144EU
Q918 SWITCH
Q919 SWITCH
Q860 SWITCH
Q859 SWITCH
Q856 INVERTER
Q853 BUFFER
Q854, 855 FOCUS REG
R998 22k
R987 10k
IC908
SELECTOR
IC908 MC14052BF
Y0 VDD
Y2 X2
Y X1
Y3 X
Y1 X0
INH X3
VEE A
VSS B
C955 0.1 F
R999 22k
Q914 DTC144EU
Q914 INVERTER
R972 220
R973 220
R974 220
CL908
CL909
CL910
CL911
CN902 4P
1.5 SMK 1
1 T STB
2 MOSI
3 SCK
4 GND
CHECK PIN

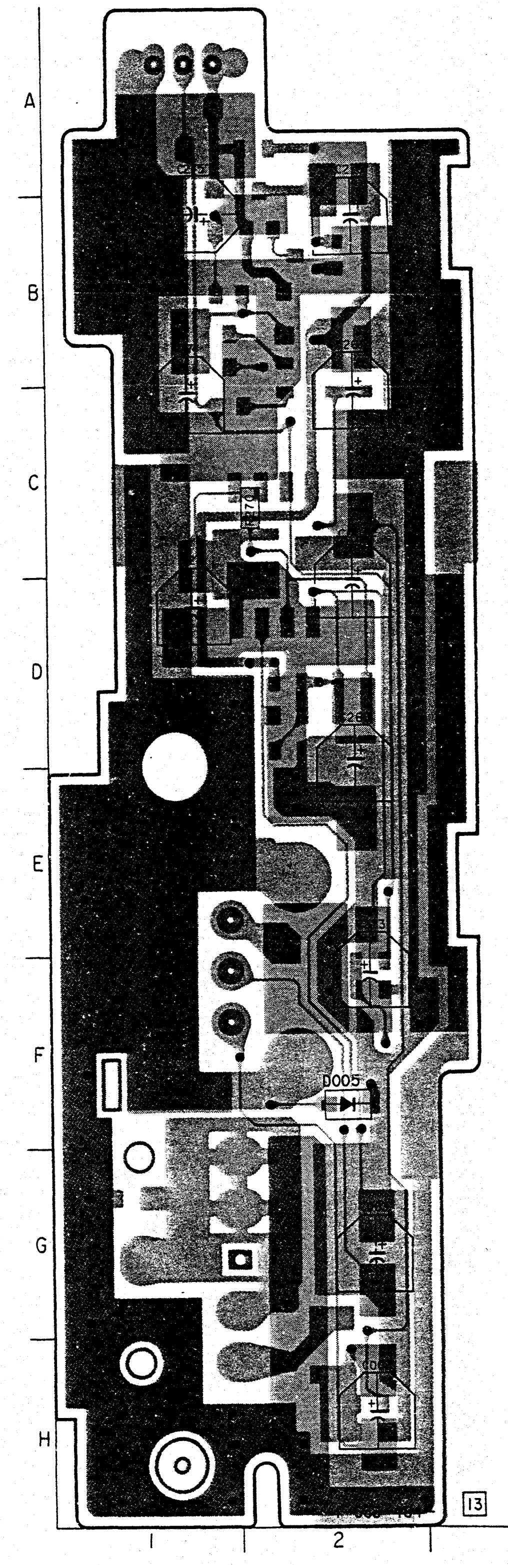
MC-65 (MIC AMPLIFIER), FA-1 (FUNCTION SWITCH), PJ-43 (OUTPUT CONNECTOR), JS-22 (COLOR CORRECT CONTROL) PRINTED WIRING BOARDS

— Ref. No. FA-1 BOARD: 2000 series, JS-22 BOARD: 5000 series, PJ-43 BOARD: 6000 series, MC-65 BOARD: 8000 series —

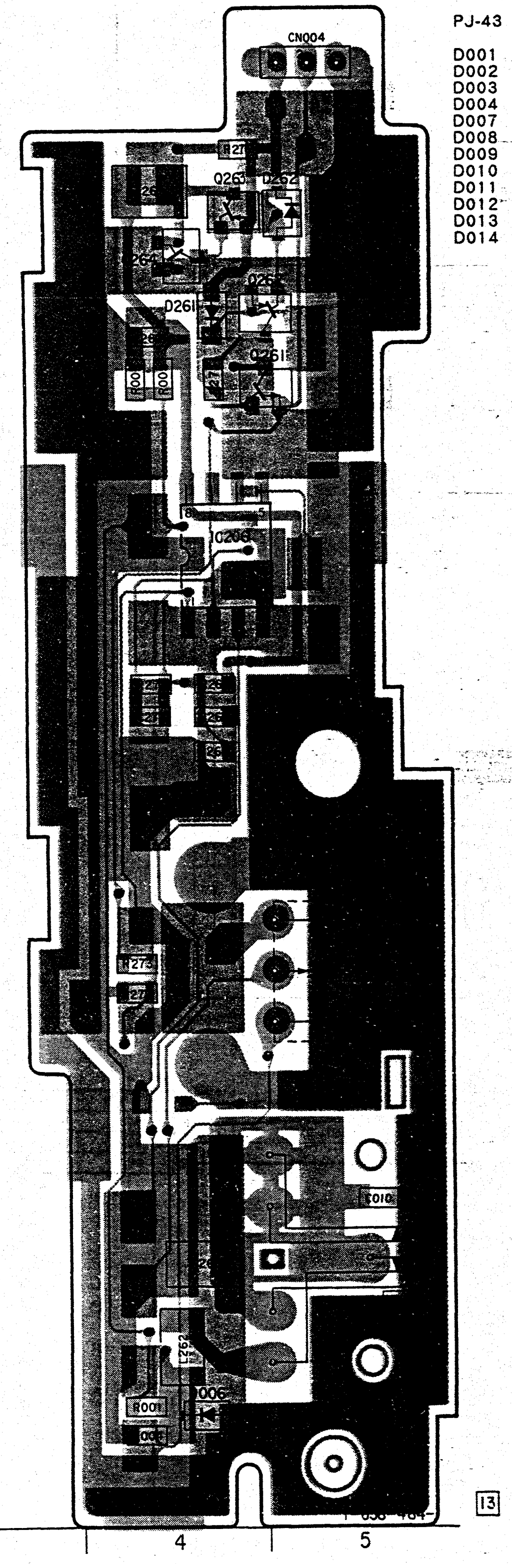
```
* A-7062-655-A MC-65 BOARD, COMPLETE
          *********************
                        (Ref.No 8,000 Series)

                   < DIODE >

D005     8-719-420-15 DIODE MA8082-M
D006     8-719-420-15 DIODE MA8082-M
D261     8-719-404-46 DIODE MA110
D262     8-719-404-46 DIODE MA110

                   < IC >

IC206    8-759-981-58 IC RC2043MD

                   < TRANSISTOR >

Q261     8-729-905-35 TRANSISTOR  2SC4081-R
Q262     8-729-905-12 TRANSISTOR  DTA144EU
Q263     8-729-920-XX TRANSISTOR  DTA114EU
Q264     8-729-905-18 TRANSISTOR  DTC144EU
```

MC-65 BOARD	
D005	F-2
D006	H-4
D261	B-4
D262	B-5
IC206	C-4
Q261	B-5
Q262	B-5
Q263	B-4
Q264	B-4

MC-65 BOARD (COMPONENT SIDE)

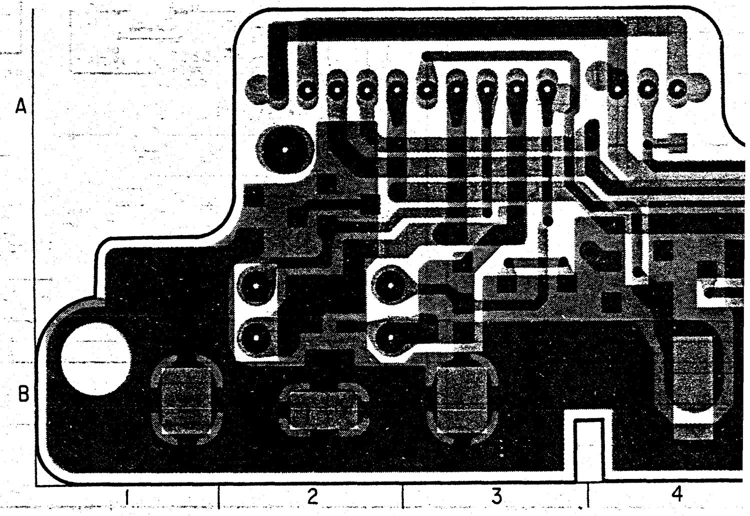


MC-65 BOARD (CONDUCTOR SIDE)

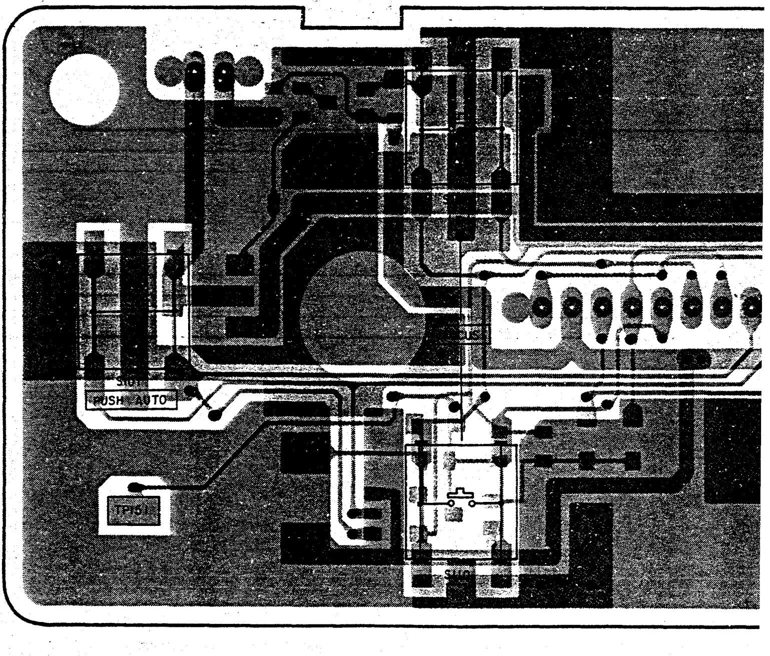


PJ-43 BOARD	
D001	A-9
D002	B-10
D003	B-11
D004	B-10
D007	B-12
D008	B-12
D009	A-13
D010	A-14
D011	B-11
D012	B-11
D013	B-9
D014	B-8

PJ-43 BOARD (CONDUCTOR SIDE)



FA-1 BOARD (COMPONENT SIDE)



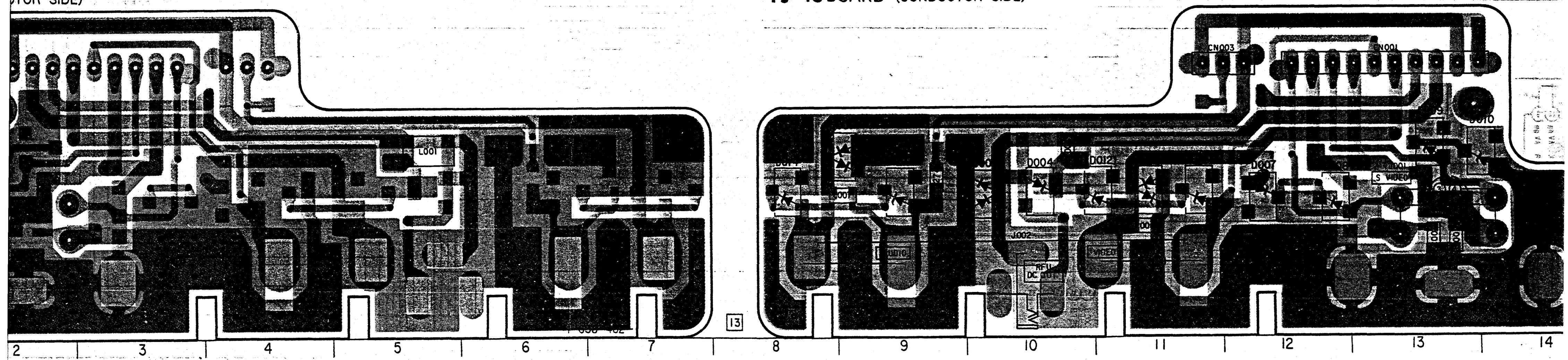
* A-7062-658-A PJ-43 BOARD, COMPLETE
****
(Ref.No 6,000 Series)

< DIODE >

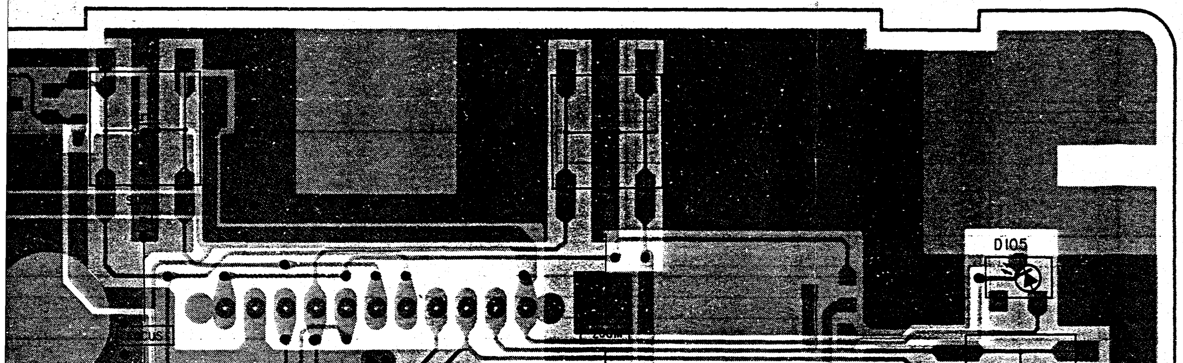
D001	8-719-800-76	DIODE	1SS226
D002	8-719-800-76	DIODE	1SS226
D003	8-719-800-76	DIODE	1SS226
D004	8-719-106-43	DIODE	RD9.1M-B1
D007	8-719-106-43	DIODE	RD9.1M-B1
D008	8-719-106-43	DIODE	RD9.1M-B1
D009	8-719-106-43	DIODE	RD9.1M-B1
D010	8-719-106-43	DIODE	RD9.1M-B1
D011	8-719-106-43	DIODE	RD9.1M-B1
D012	8-719-106-43	DIODE	RD9.1M-B1
D013	8-719-106-43	DIODE	RD9.1M-B1
D014	8-719-106-43	DIODE	RD9.1M-B1

TOR SIDE)

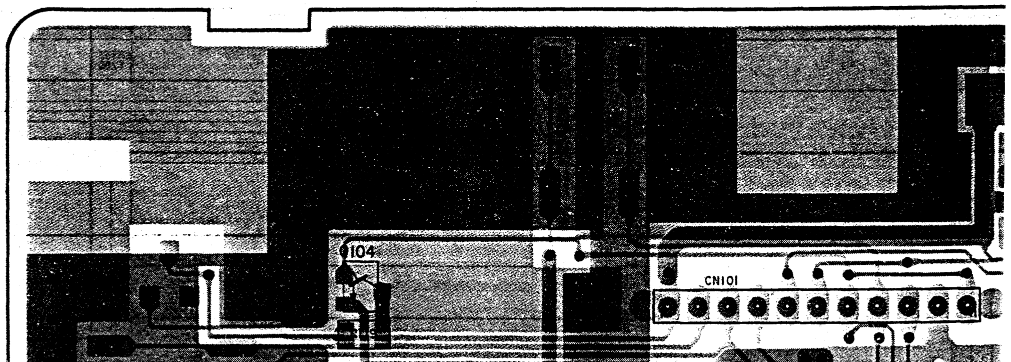
PJ-43 BOARD (CONDUCTOR SIDE)


L001
CN003
CN001
D004
D012
D007
J002
S VIDEO
D010
13
2
3
4
5
6
7
8
9
10
11
12
13
14

SIDE)


D105
ON/OFF
1-638-481-
13

FA-1 BOARD (CONDUCTOR SIDE)



RRECT CONTROL) PRINTED WIRING BOARDS

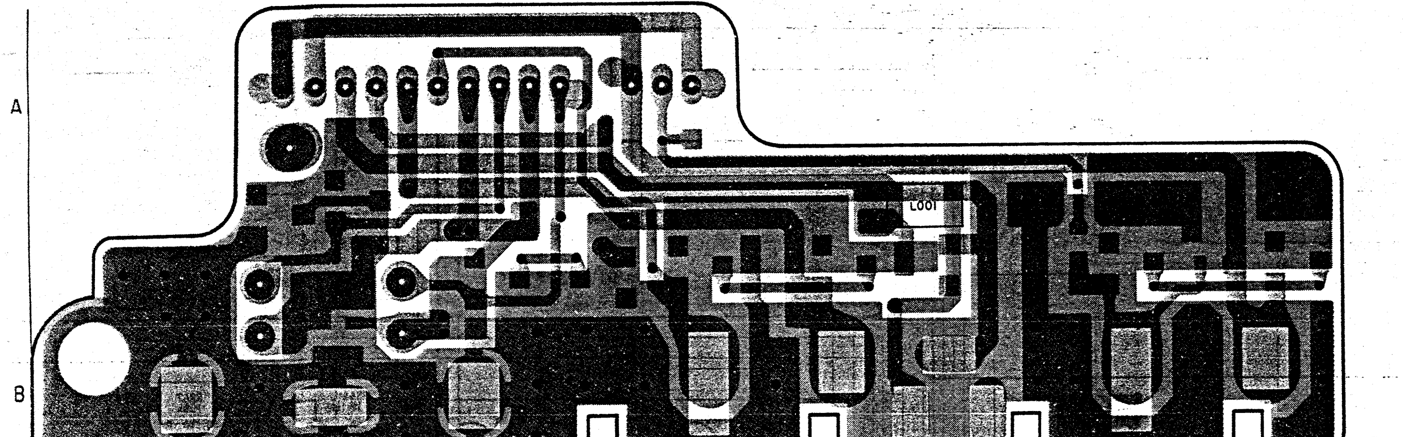
* A-7062-658-A PJ-43 BOARD, COMPLETE
****
(Ref. No 6,000 Series)

< DIODE >

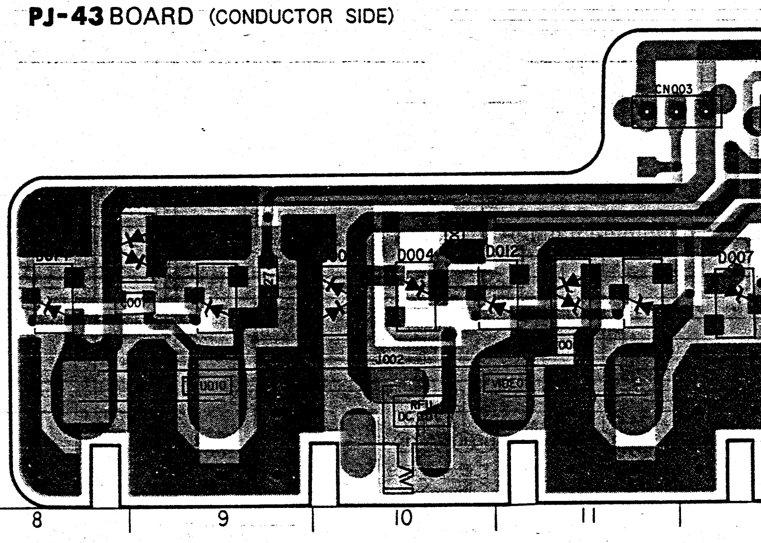
D001	8-719-800-76	DIODE	1SS226
D002	8-719-800-76	DIODE	1SS226
D003	8-719-800-76	DIODE	1SS226
D004	8-719-106-43	DIODE	RD9. 1M-B1
D007	8-719-106-43	DIODE	RD9. 1M-B1
D008	8-719-106-43	DIODE	RD9. 1M-B1
D009	8-719-106-43	DIODE	RD9. 1M-B1
D010	8-719-106-43	DIODE	RD9. 1M-B1
D011	8-719-106-43	DIODE	RD9. 1M-B1
D012	8-719-106-43	DIODE	RD9. 1M-B1
D013	8-719-106-43	DIODE	RD9. 1M-B1
D014	8-719-106-43	DIODE	RD9. 1M-B1

)ARD
-9
-10
-11
-10
-12
-12
-13
-14
-11
-11
-9
-8

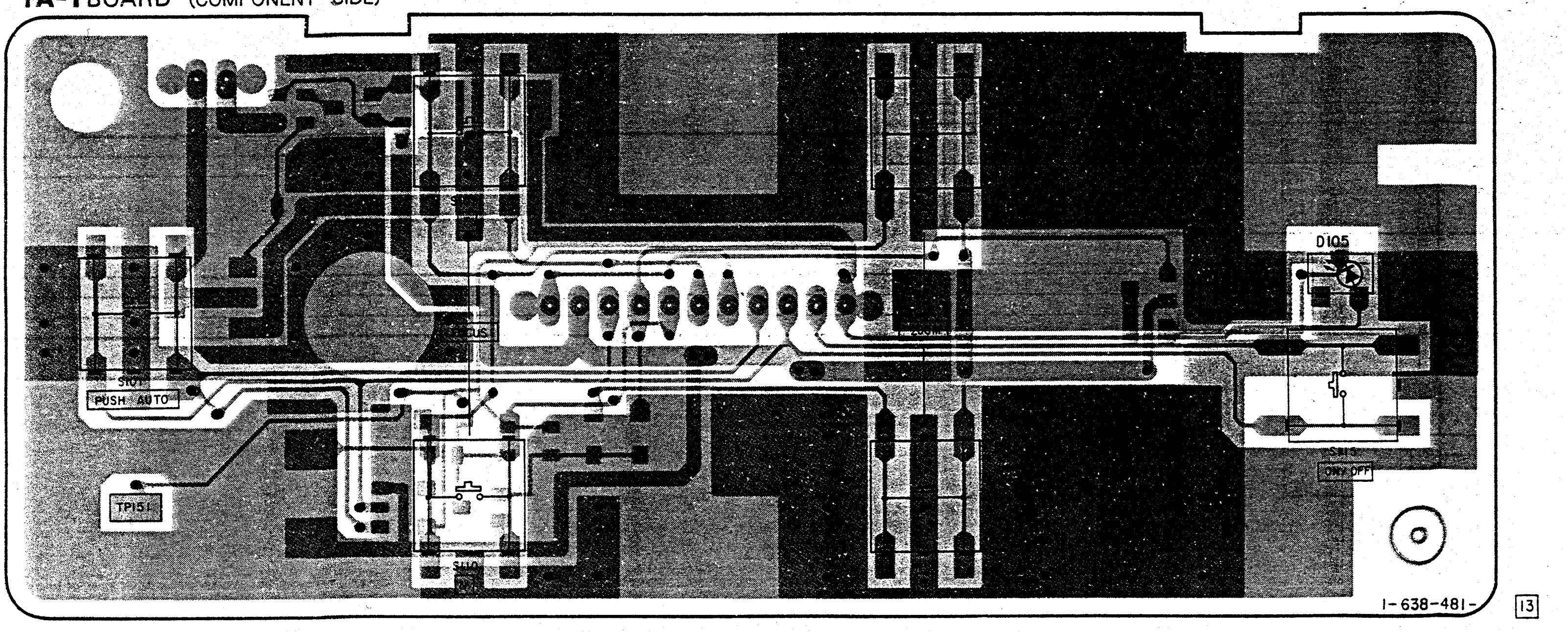
PJ-43 BOARD (CONDUCTOR SIDE)


A
B
L001
13
1
2
3
4
5
6
7

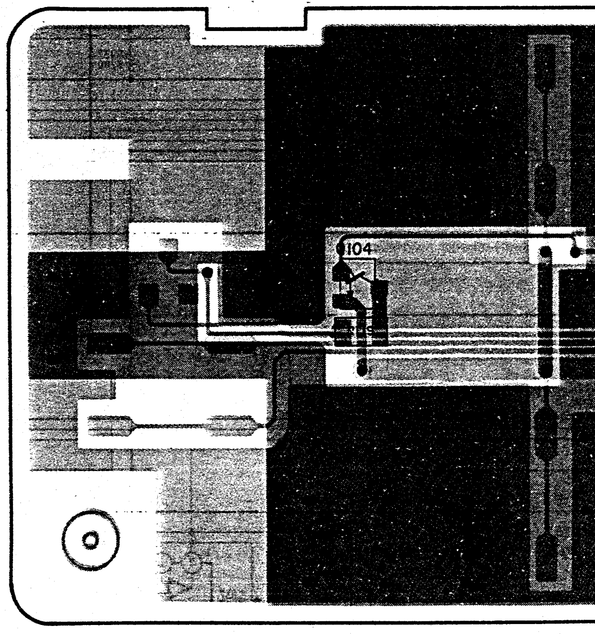
PJ-43 BOARD (CONDUCTOR SIDE)


CN003
D004
D012
D007
D002
D010
8
9
10
11

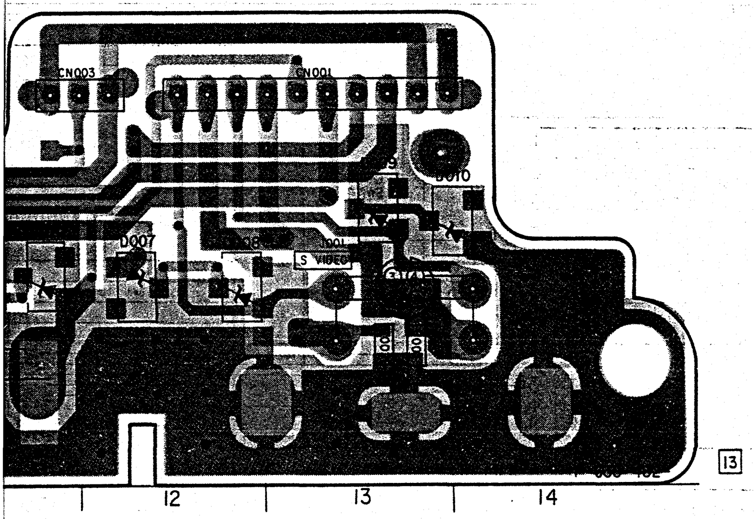
FA-1 BOARD (COMPONENT SIDE)


S101
PUSH AUTO
TP151
S103
D105
S41
ON OFF
1-638-481-
13

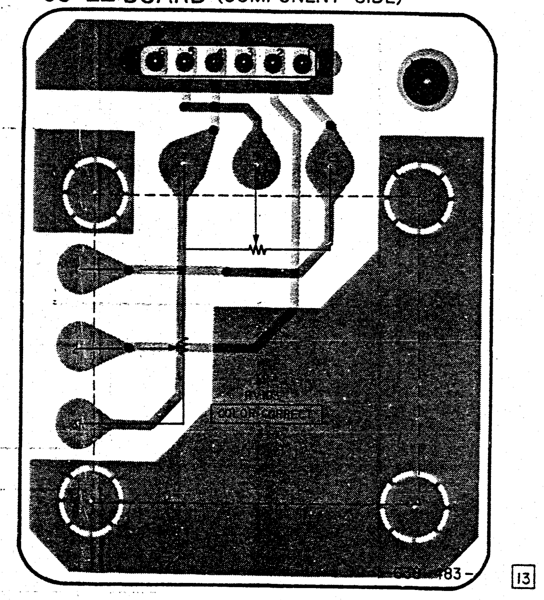
FA-1 BOARD (CONDUCTOR SIDE)

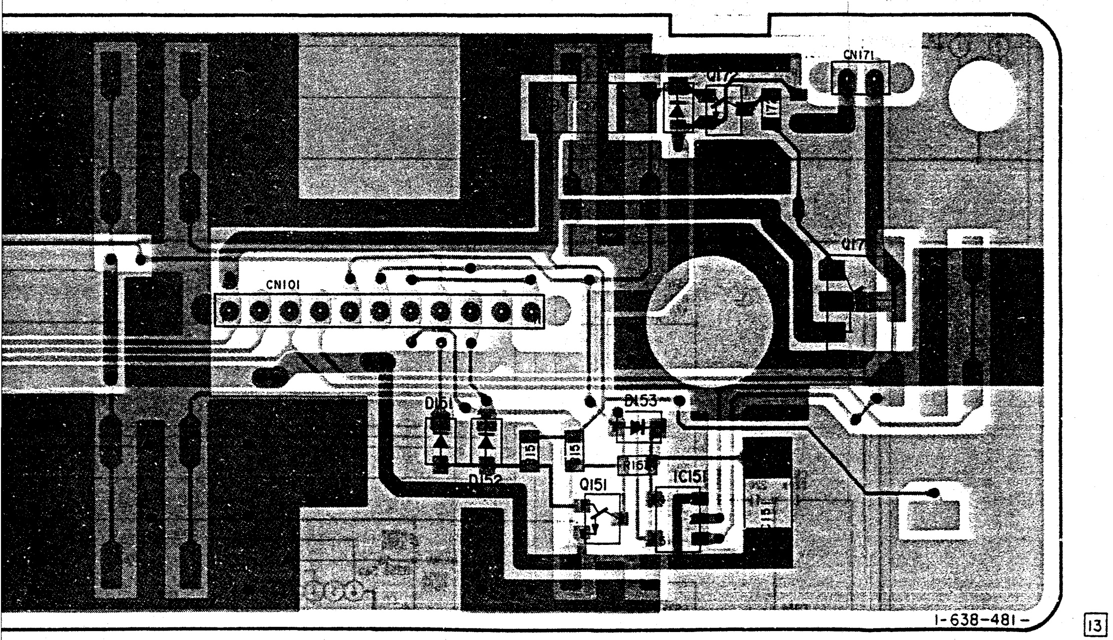


FUNCTION/MIC AMP


CN003
CN001
D007
D010
S VIDEO
12
13
14
13

JS-22 BOARD (COMPONENT SIDE)




CN171
CN101
D151
D152
D153
Q151
IC151
Q171
Q172
1-638-481-
13

* A-7062-656-A FA-1 BOARD, COMPLETE
****
(Ref.No 2,000 Series)

< DIODE >

D105	8-719-928-15	DIODE SLM-13DW-T-147
D151	8-719-404-46	DIODE MA110
D152	8-719-404-46	DIODE MA110
D153	8-719-404-46	DIODE MA110
D171	8-719-404-46	DIODE MA110

< IC >

IC151	8-759-234-77	IC TC4S66F-TE85L

< TRANSISTOR >

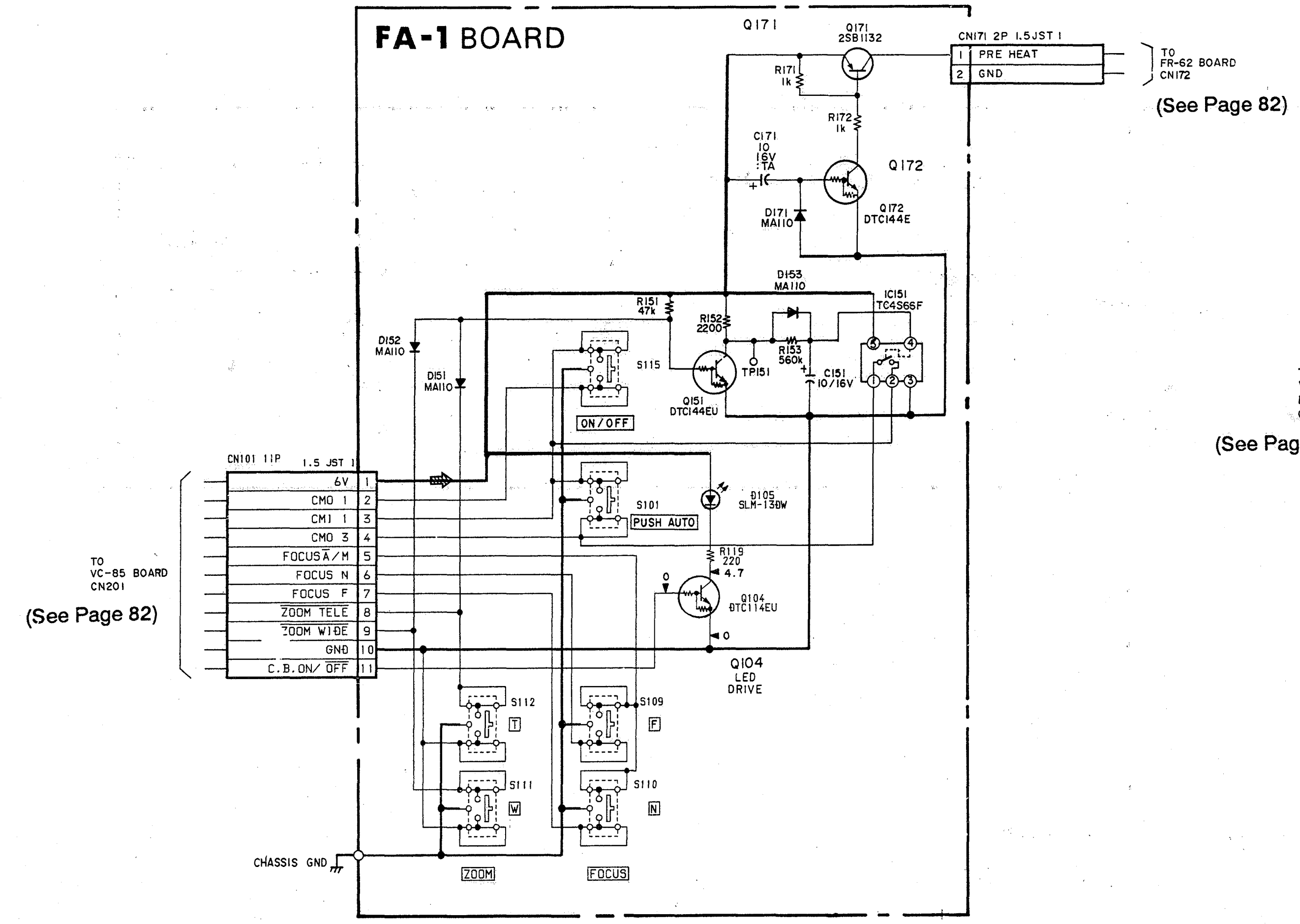
Q104	8-729-907-00	TRANSISTOR	DTC114EU
Q151	8-729-905-18	TRANSISTOR	DTC144EU
Q171	8-729-106-60	TRANSISTOR	2SB1115A
Q172	8-729-905-18	TRANSISTOR	DTC144EU

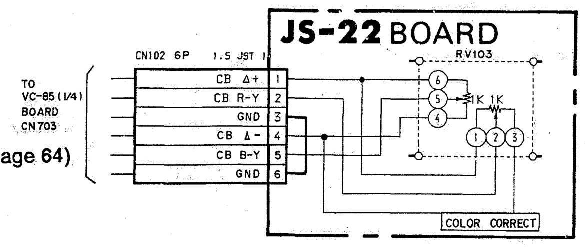
MC-65 (MIC AMPLIFIER), FA-1 (FUNCTION SWITCH), PJ-43 (OUTPUT CONNECTOR), JS-22 (COLOR CORRECT CONTROL) SCHEMATIC DIAGRAMS

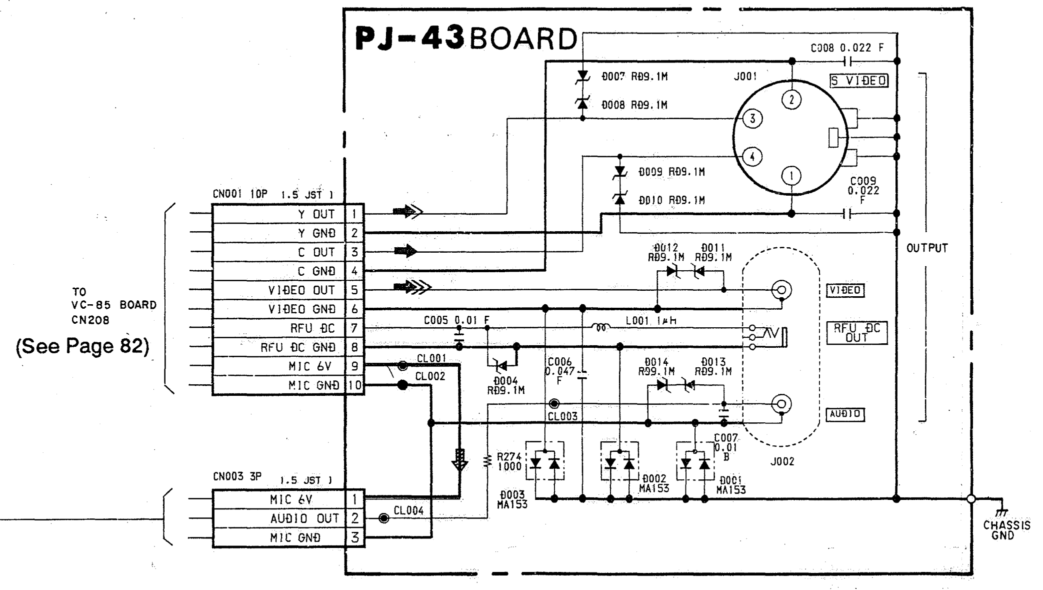
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

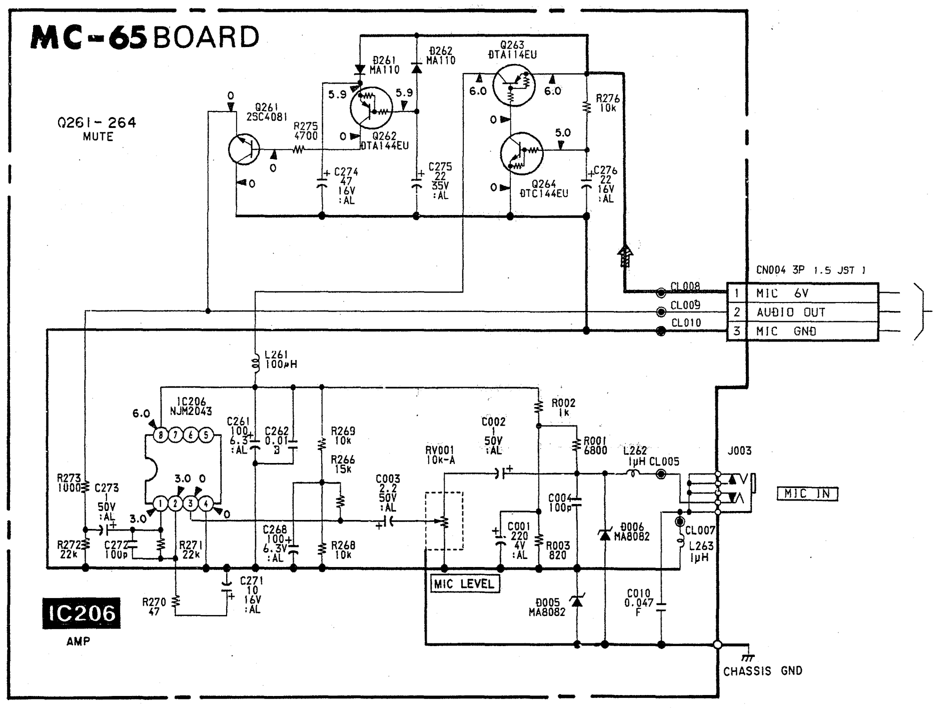
A B C D E F G H I J

— Ref. No. FA-1 BOARD: 2000 series, JS-22 BOARD: 5000 series, PJ-43 BOARD: 6000 series, MC-65 BOARD: 8000 series —


FA-1 BOARD
Q171
Q171 2SB1132
CN171 2P 1.5JST 1
1 PRE HEAT
2 GND
TO FR-62 BOARD CN172
(See Page 82)
R171 1k
R172 1k
C171 10 16V :TA
Q172
D171 MA110
Q172 DTC144E
D153 MA110
IC151 TC4S66F
R151 47k
R152 2200
R153 560k
TP151
C151 10/16V
Q151 DTC144EU
D152 MA110
D151 MA110
S115
ON/OFF
S101
PUSH AUTO
D105 SLM-130W
R119 220
4.7
0
Q104 DTC114EU
Q104 LED DRIVE
CN101 11P 1.5 JST 1
6V 1
CMO 1 2
CMI 1 3
CMO 3 4
FOCUS A/M 5
FOCUS N 6
FOCUS F 7
ZOOM TELE 8
ZOOM WIDE 9
GND 10
C.B.ON/ OFF 11
TO VC-85 BOARD CN201
(See Page 82)
S112
T
S111
W
S109
F
S110
N
CHASSIS GND
ZOOM
FOCUS

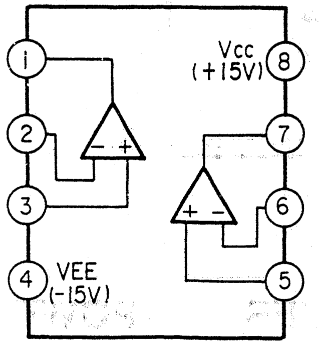

JS-22 BOARD
CN102 6P 1.5 JST 1
CB Δ+ 1
CB R-Y 2
GND 3
CB Δ- 4
CB B-Y 5
GND 6
TO VC-85 (1/4) BOARD CN703
(See Page 64)
RV103
1K 1K
COLOR CORRECT


PJ-43 BOARD
C008 0.022 F
D007 RD9.1M
D008 RD9.1M
J001
S VIDEO
D009 RD9.1M
D010 RD9.1M
C009 0.022 F
OUTPUT
CN001 10P 1.5 JST 1
Y OUT 1
Y GND 2
C OUT 3
C GND 4
VIDEO OUT 5
VIDEO GND 6
RFU DC 7
RFU DC GND 8
MIC 6V 9
MIC GND 10
TO VC-85 BOARD CN208
(See Page 82)
D012 RD9.1M
D011 RD9.1M
VIDEO
C005 0.01 F
L001 1μH
RFU DC OUT
CL001
CL002
D004 RD9.1M
C006 0.047 F
D014 RD9.1M
D013 RD9.1M
AUDIO
CL003
C007 0.01 B
J002
R274 1000
D003 MA153
D002 MA153
D001 MA153
CN003 3P 1.5 JST 1
MIC 6V 1
AUDIO OUT 2
MIC GND 3
CL004
CHASSIS GND


MC-65 BOARD
Q261-264 MUTE
Q261 2SC4081
R275 4700
D261 MA110
D262 MA110
Q262 DTA144EU
Q263 DTA114EU
Q264 DTC144EU
R276 10k
C274 47 16V :AL
C275 22 35V :AL
C276 22 16V :AL
5.9
6.0
5.0
0
CN004 3P 1.5 JST 1
CL008
CL009
CL010
1 MIC 6V
2 AUDIO OUT
3 MIC GND
L261 100μH
IC206 NJM2043
6.0
3.0
R273 1000
C273 1 50V :AL
R272 22k
C272 100p
R271 22k
R270 47
C271 10 16V :AL
C261 100 6.3 :AL
C262 0.01 B
C268 100 6.3V :AL
R269 10k
R266 15k
R268 10k
C003 2.2 50V :AL
RV001 10k-A
MIC LEVEL
C002 1 50V :AL
C001 220 4V :AL
R002 1k
R001 6800
R003 820
C004 100p
D006 MA8082
D005 MA8082
C010 0.047 F
L262 1μH
CL005
CL007
L263 1μH
J003
MIC IN
CHASSIS GND
IC206
AMP

09

IC206 NJM2043


1
2
3
4
VEE (-15V)
Vcc (+15V)
8
7
6
5

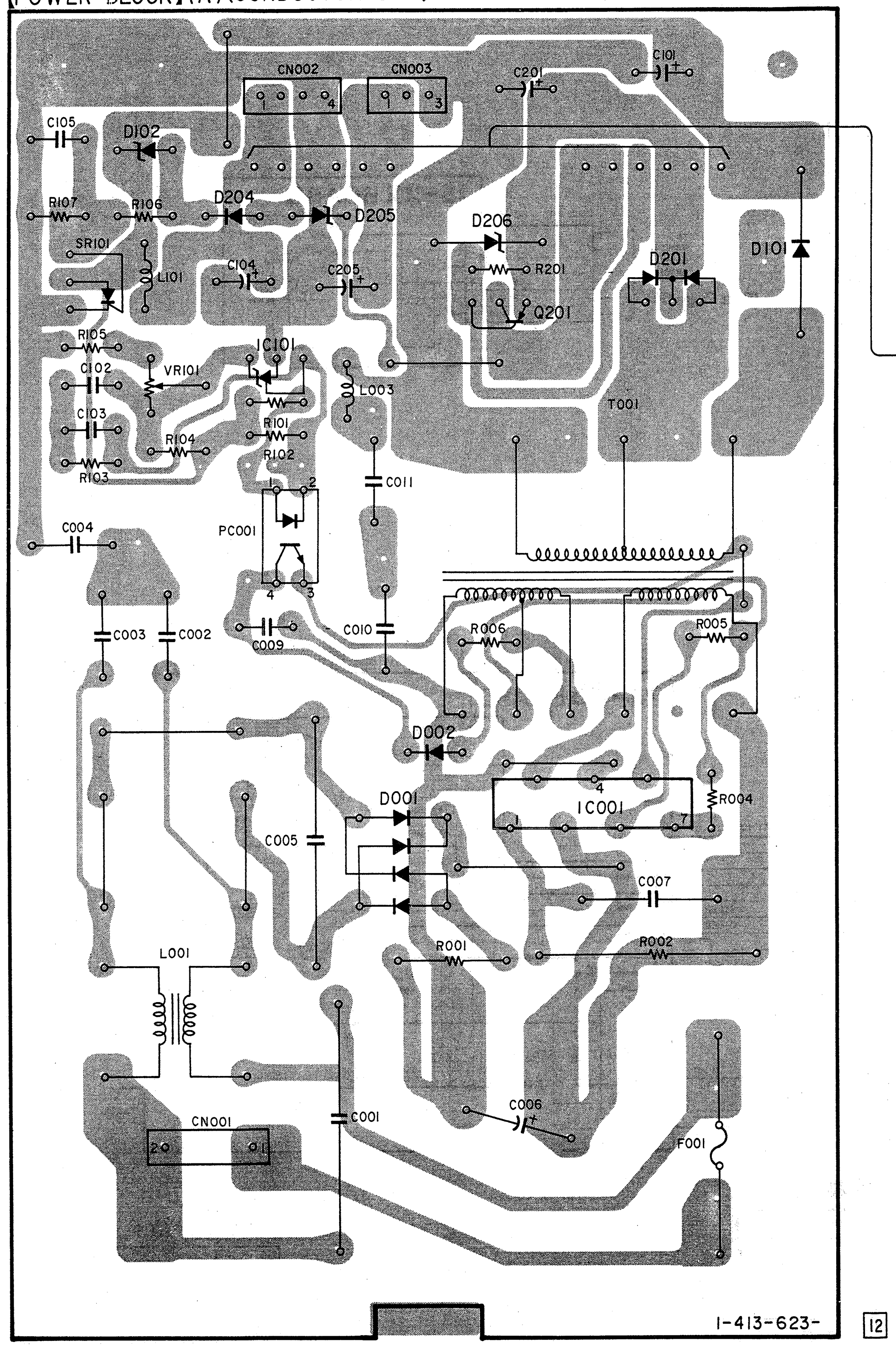
- **SIGNAL PATH**

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA/DATA	
REC	➡	➡»	➡»»	
PB				

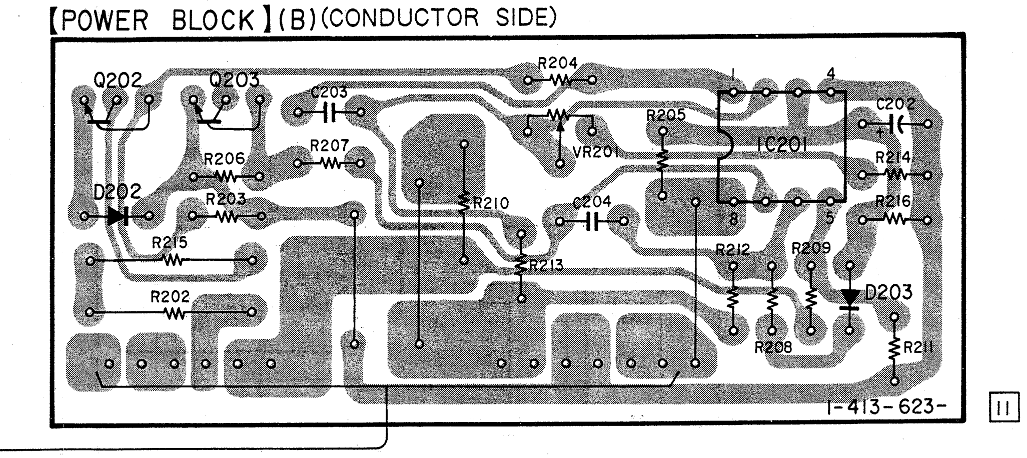
POWER BLOCK (POWER) PRINTED WIRING BOARD

— Ref. No. POWER BLOCK BOARD: 9000 series —

[POWER BLOCK](A)(CONDUCTOR SIDE)


CN002
CN003
C201
C101
C105
D102
R107
R106
D204
D205
D206
R201
SR101
L101
C104
C205
D201
D101
Q201
R105
IC101
C102
VR101
L003
T001
C103
R101
R104
R102
R103
C011
C004
PC001
C003
C002
C009
C010
R006
R005
D002
D001
IC001
R004
C005
C007
L001
R001
R002
C006
CN001
C001
F001
1-413-623-
12

[POWER BLOCK](B)(CONDUCTOR SIDE)


Q202
Q203
C203
R204
R205
C202
R206
R207
VR201
IC201
R214
D202
R203
R210
C204
R216
R215
R213
R212
R209
D203
R202
R208
R211
1-413-623-
11

1-413-623-12 POWER BLOCK BOARD
****
(Ref. No 9,000 Series)

< DIODE >

D001	8-719-510-06	DIODE	SIWB60
D002	9-998-444-01	DIODE	1SS178
D101	8-719-948-59	DIODE	ERB93-02
D102	9-998-446-01	DIODE	RD15ESAB
D201	8-719-510-37	DIODE	D5LC20U
D202	9-998-444-01	DIODE	1SS178
D203	9-998-444-01	DIODE	1SS178
D204	9-998-444-01	DIODE	1SS178
D205	9-998-448-01	DIODE	RD6.8ESAB
D206	8-719-115-07	DIODE	RD15EB

< IC >

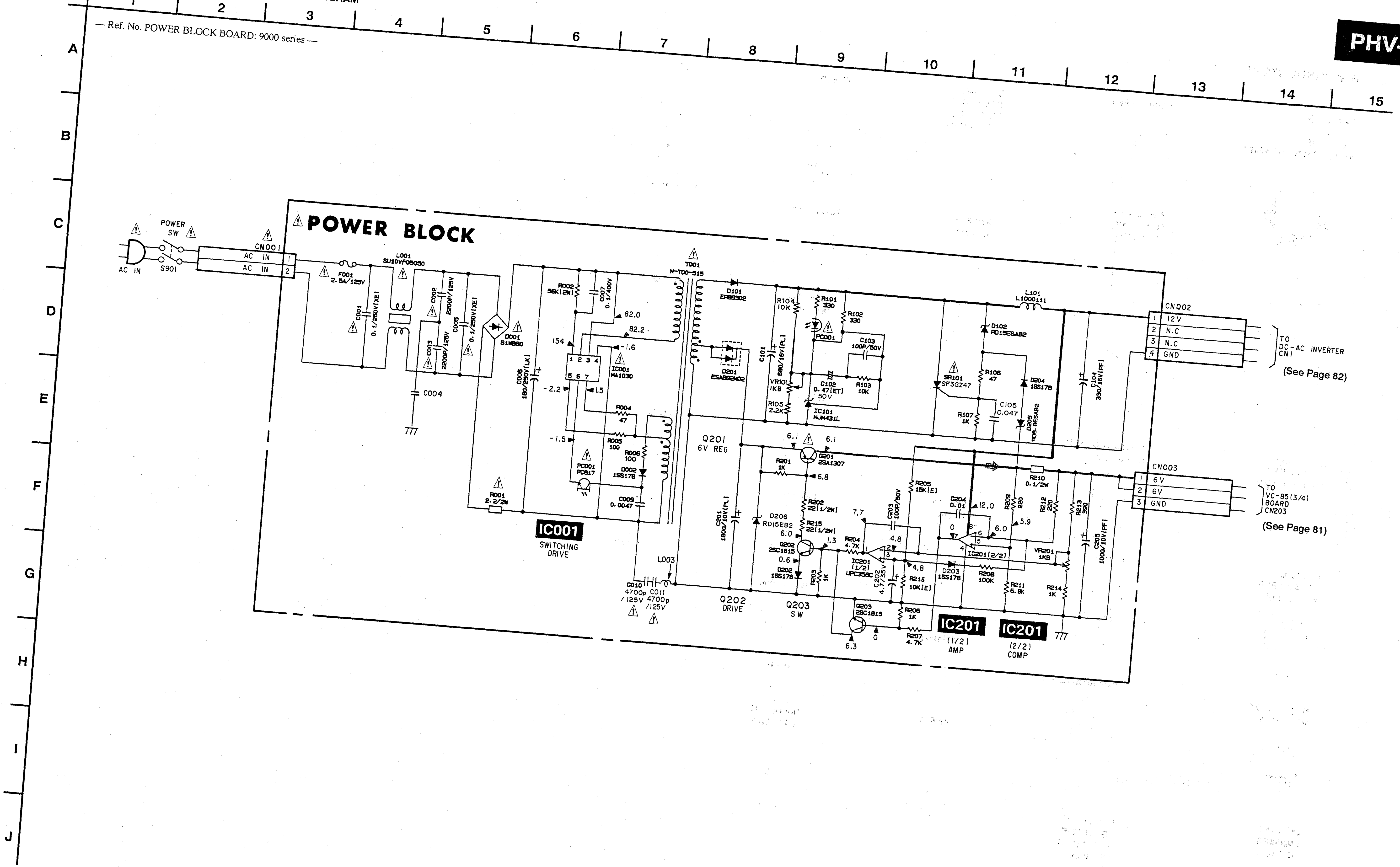
IC001	9-998-449-01	IC	MA1030
IC101	9-998-450-01	IC	NJM431L
IC201	8-759-135-80	IC	uPC358C

< TRANSISTOR >

Q201	9-998-454-01	TRANSISTOR	2SA1307
Q202	9-998-455-01	TRANSISTOR	2SC1815
Q203	9-998-455-01	TRANSISTOR	2SC1815

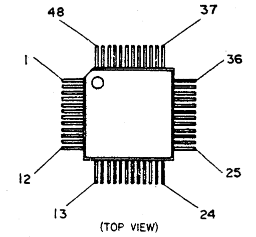
POWER BLOCK (POWER) SCHEMATIC DIAGRAM

— Ref. No. POWER BLOCK BOARD: 9000 series —

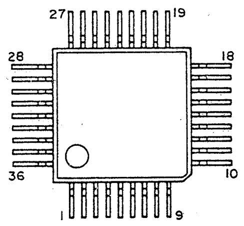

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
POWER BLOCK
AC IN
POWER SW
S901
CN001
AC IN 1
AC IN 2
F001 2.5A/125V
L001 SU10VF05050
C001 0.1/250V(XE)
C002 2200P/125V
C003 2200P/125V
C004
C005 0.1/250V(XE)
D001 S1WB60
C006 180/250V(LK)
R001 2.2/2W
R002 56K(2W)
C007 0.1/400V
IC001 MA1030
154
82.0
82.2
-1.6
-2.2
1.5
-1.5
R004 47
R005 100
R006 100
D002 1SS178
PC001 PC817
C009 0.0047
IC001
SWITCHING DRIVE
T001 N-T00-515
L003
C010 4700p /125V
C011 4700p /125V
D101 ERB9302
D201 ESAB92M02
C201 1800/10V(PL)
Q201 6V REG
R104 10K
R101 330
R102 330
PC001
C101 680/16V(PL)
C103 100P/50V
VR101 1KB
R105 2.2K
C102 0.47(ET) 50V
R103 10K
IC101 NJM431L
L101 L1000111
D102 RD15ESAB2
SR101 SF3G247
R106 47
D204 1SS178
R107 1K
C105 0.047
D205 RD6.8ESAB2
C104 330/16V(PF)
CN002
1 12V
2 N.C
3 N.C
4 GND
TO DC-AC INVERTER CN1
(See Page 82)
6.1
6.1
Q201 2SA1307
R201 1K
6.8
R202 22(1/2W)
R215 22(1/2W)
D206 RD15EB2
6.0
Q202 2SC1815
0.6
D202 1SS178
1.3
R203 1K
R204 4.7K
7.7
C203 100P/50V
4.8
IC201 (1/2) UPC358C
C202 4.7/35V
4.8
R216 10K(E)
R205 15K(E)
C204 0.01
12.0
0
8
6
5
4
6.0
5.9
IC201(2/2)
D203 1SS178
R208 100K
R209 220
R210 0.1/2W
R211 6.8K
R212 220
R213 390
VR201 1KB
R214 1K
C205 1000/10V(PF)
Q203 2SC1815
R206 1K
R207 4.7K
6.3
0
Q202 DRIVE
Q203 SW
IC201
(1/2) AMP
IC201
(2/2) COMP
CN003
1 6V
2 6V
3 GND
TO VC-85(3/4) BOARD CN203
(See Page 81)

4-3. SEMICONDUCTORS

CXA1072R
CXA1339R
CXD1204R
MC68HC05N4-SC40667

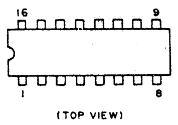

48
37
1
36
12
25
13
24
(TOP VIEW)

CXD1159Q

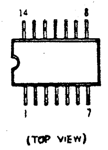

27
19
28
18
36
10
1
9

MAKING SIDE VIEW

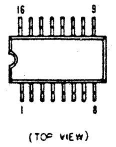
CXD1172AM
HD14053BFP
SN74HC174NS


16
9
1
8
(TOP VIEW)

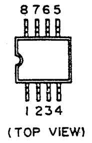
CX20095A
HD14066BFP
MC14066BF


14
8
1
7
(TOP VIEW)

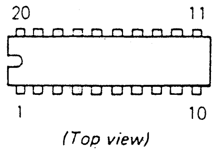
HD14052BFP
MPC1725M


16
9
1
8
(TOP VIEW)

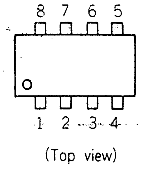
LM324NS
LM358PS
μPC393G2


8765
1234
(TOP VIEW)

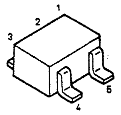
MB88341PFV


20
11
1
10
(Top view)

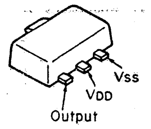
MM1036XF
RC2043MD
TL026CP3


8 7 6 5
1 2 3 4
(Top view)

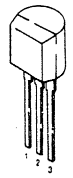
SC14S66F



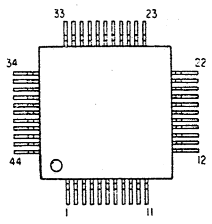
S-8054ALB-LM-S
S-8054HN-CB


Vss
VDD
Output

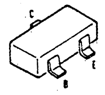
S-81350HG



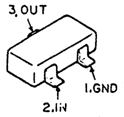
μPD7508BGB-522


33
23
34
22
44
12
1
11

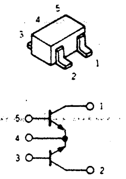
DTA114EU
2SA1576-R
2SC2712-YG
2SC3859
2SC4081-R



DTA144EU
DTC114EU
DTC144EU
DTC144WU

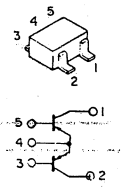

3,OUT
1,GND
2,IN

XN1213
XN1216

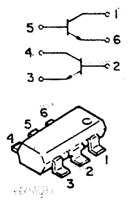

5
4
3
1
2
5
4
3
1
2

1 Tr1 :Collector 1
2 Tr2 :Collector 2
3 Tr2 :Base 2
4 Tr1,2 :Emitter
5 Tr1 :Base 1

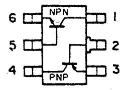
XN1401


5
4
3
1
2
5
4
3
1
2

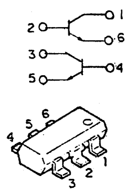
XN4501
XN6501


5
4
3
1
6
2
6
5
4
1
2
3

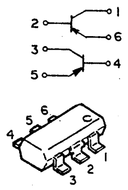
XN4601


6
5
4
NPN
PNP
1
2
3

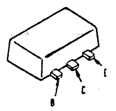
XN6215


2
3
5
1
6
4
6
5
4
1
2
3

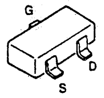
XN6401


2
3
5
1
6
4
6
5
4
1
2
3

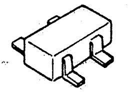
2SB1115A



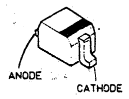
2SK160-K5
2SK300-3



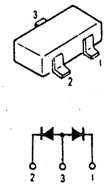
GL1HY51



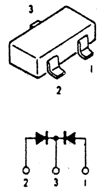
MA110


ANODE
CATHODE

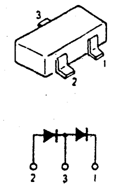
MA141WA



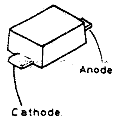
MA141WK
MA152WK



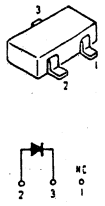
MA143



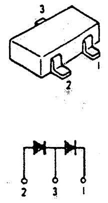
MA8082-M


Anode
Cathode

RD9.1M-B1

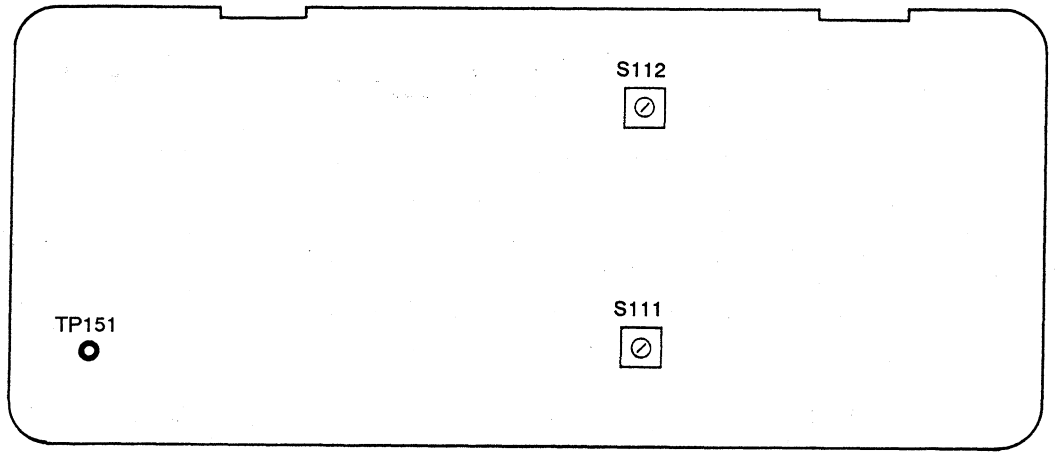


1SS226

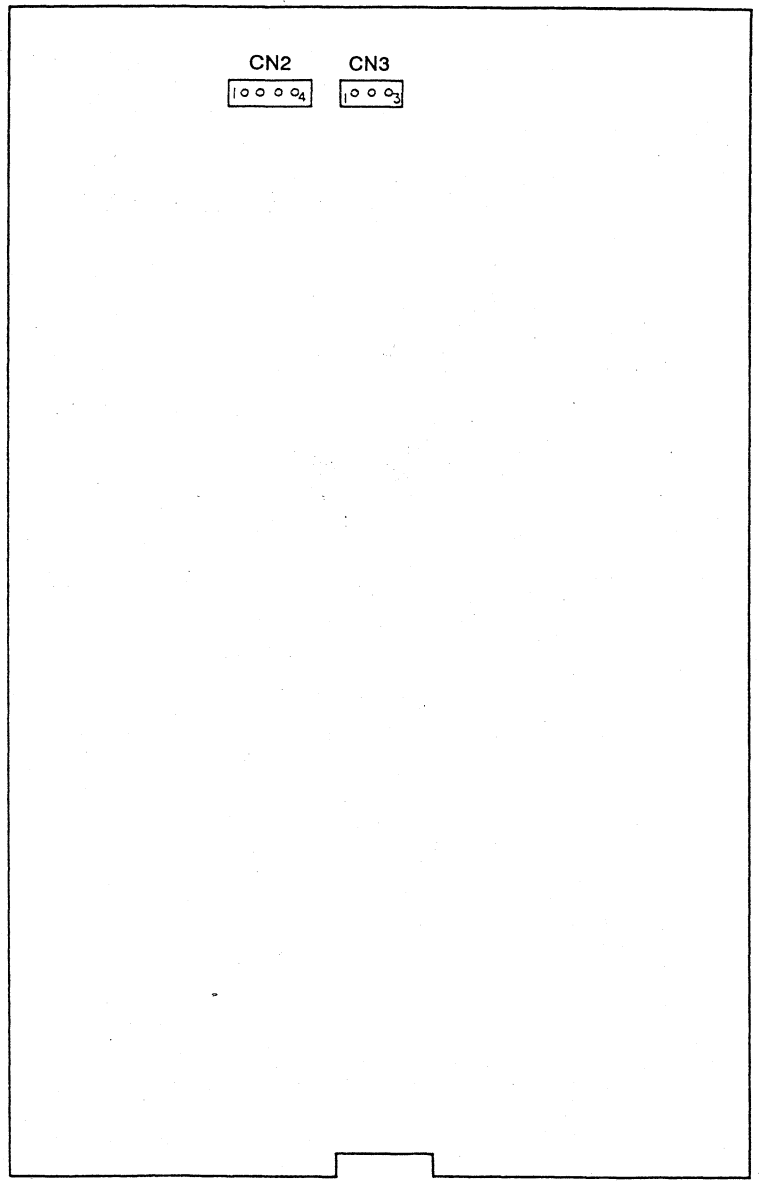


7-4. ARRANGEMENT DIAGRAM FOR ADJUSTMENT PARTS

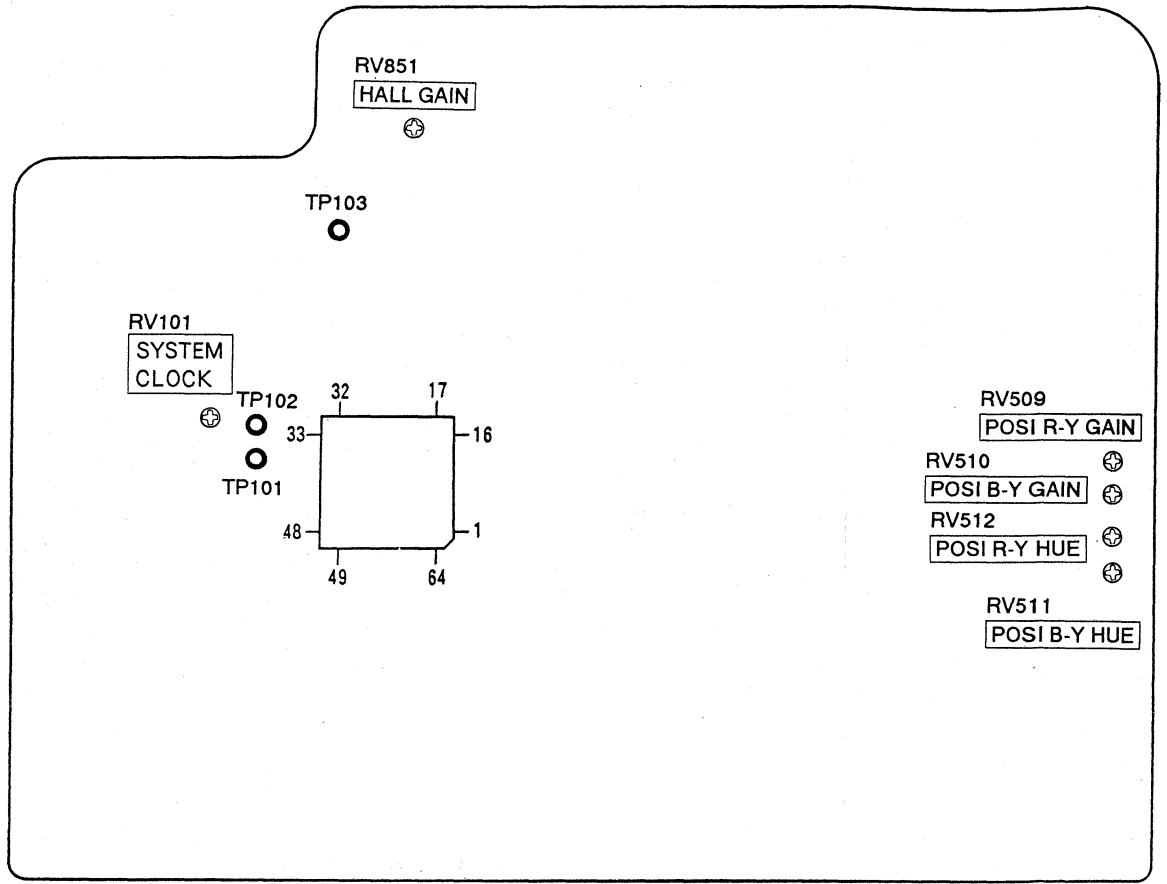
FA-1 BOARD (COMPONENT SIDE)


S112
TP151
S111

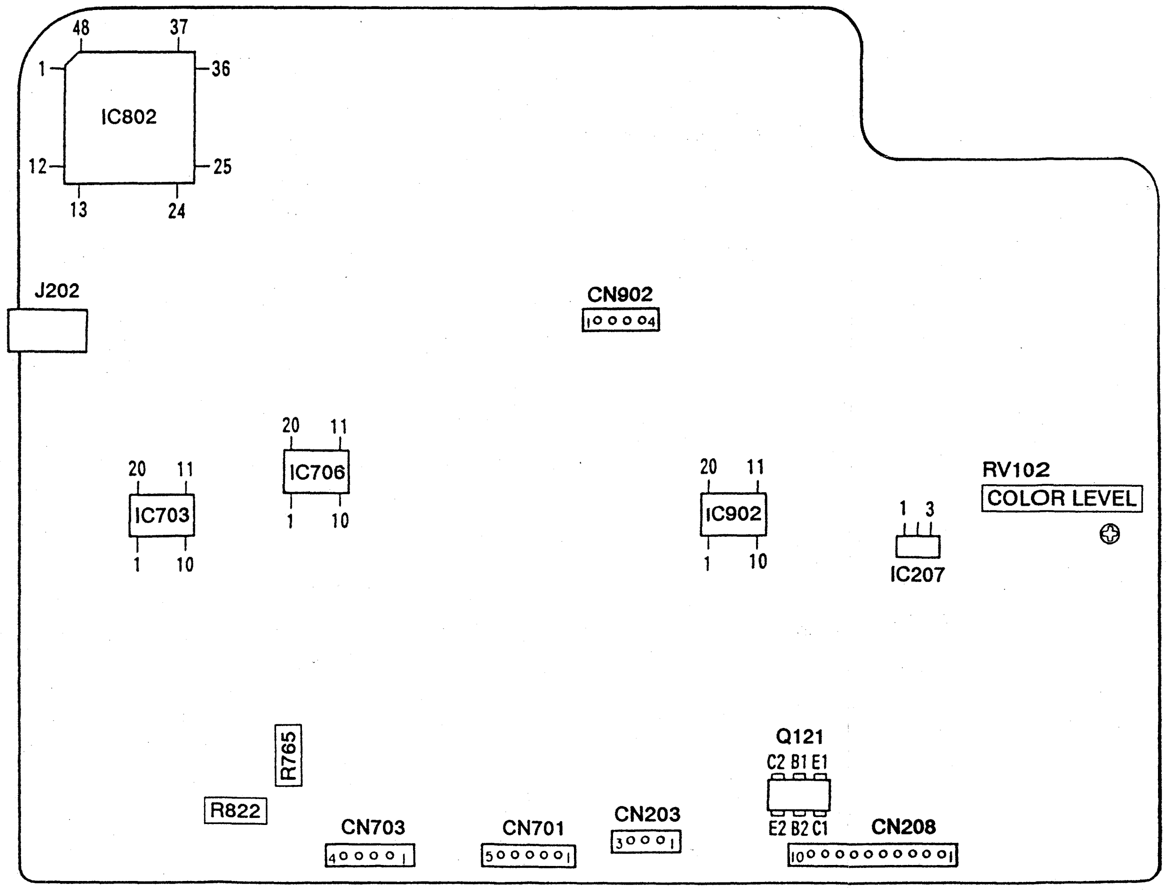
POWER BLOCK (CONDUCTOR SIDE)


CN2
CN3
1
4
1
3

VC-85 BOARD (COMPONENT SIDE)


RV851
HALL GAIN
TP103
RV101
SYSTEM CLOCK
TP102
TP101
32
17
33
16
48
1
49
64
RV509
POSI R-Y GAIN
RV510
POSI B-Y GAIN
RV512
POSI R-Y HUE
RV511
POSI B-Y HUE

VC-85 BOARD (CONDUCTOR SIDE)


48
37
1
36
IC802
12
25
13
24
J202
CN902
1
4
20
11
IC706
1
10
20
11
IC703
1
10
20
11
IC902
1
10
1
3
IC207
RV102
COLOR LEVEL
R765
R822
CN703
4
1
CN701
5
1
CN203
3
1
Q121
C2 B1 E1
E2 B2 C1
CN208
10
1

SECTION 5
EXPLODED VIEWS

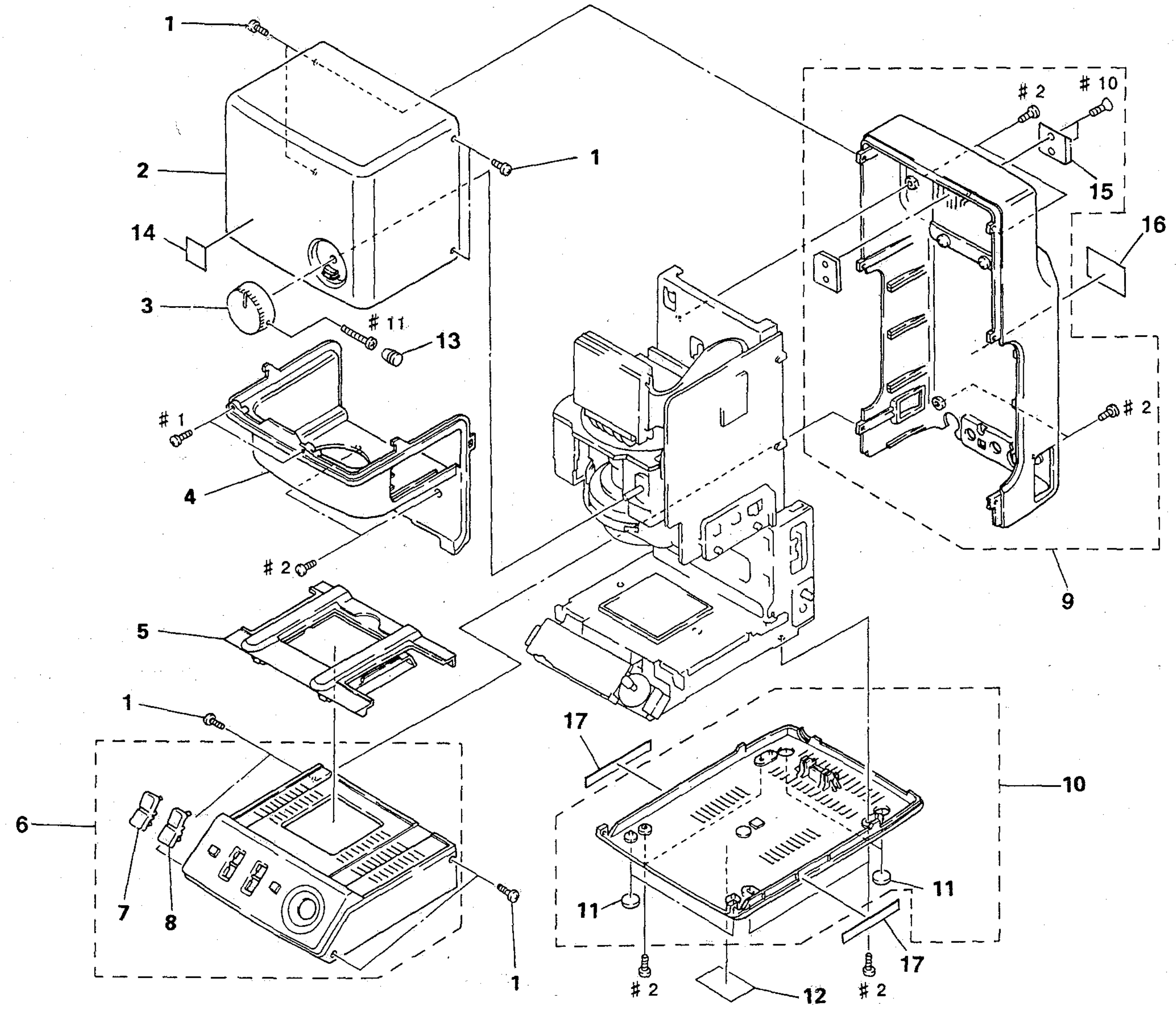
NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " ∗ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

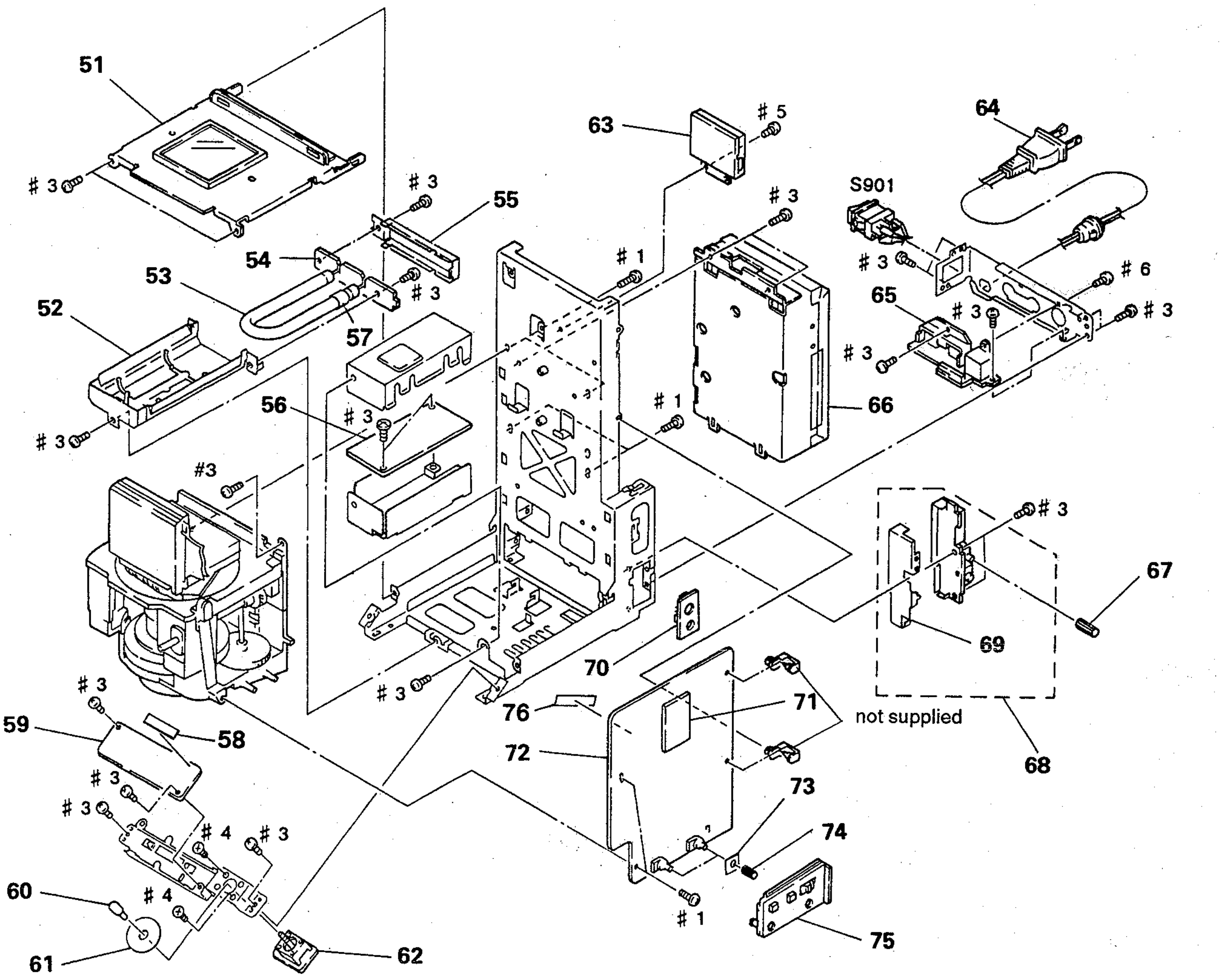
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

5-1. CABINET



Ref. No.	Part No.	Description	Remark
1	3-719-381-11	SCREW (M2X5)	
2	X-3940-410-3	CABINET ASSY, TOP	
3	X-3940-474-1	KNOB ASSY, DIAL	
4	3-941-663-02	CABINET (MID)	
5	X-3940-418-1	GUIDE ASSY, FILM	
6	X-3940-766-1	PANEL ASSY, FRONT	
7	3-941-844-11	BUTTON, FOCUS SW	
8	3-941-673-01	SWITCH, ROCKER	
9	X-3940-767-1	CABINET ASSY, REAR	
10	X-3940-419-2	CABINET ASSY, BOTTOM	
11	3-941-861-01	FOOT, RUBBER	
12	* 3-944-020-01	LABEL, MODEL NUMBER (U)	
13	3-942-084-01	KNOB, CAP	
14	3-703-713-21	STICKER, SONY SYMBOL (10)	
15	3-724-511-01	SHOE, ACCESSORY	
16	3-703-845-01	LABEL (N) (U/C), MAIN CAUTION	(US, Canadian)
17	3-839-335-01	CUSHION	

5-2. CHASSIS

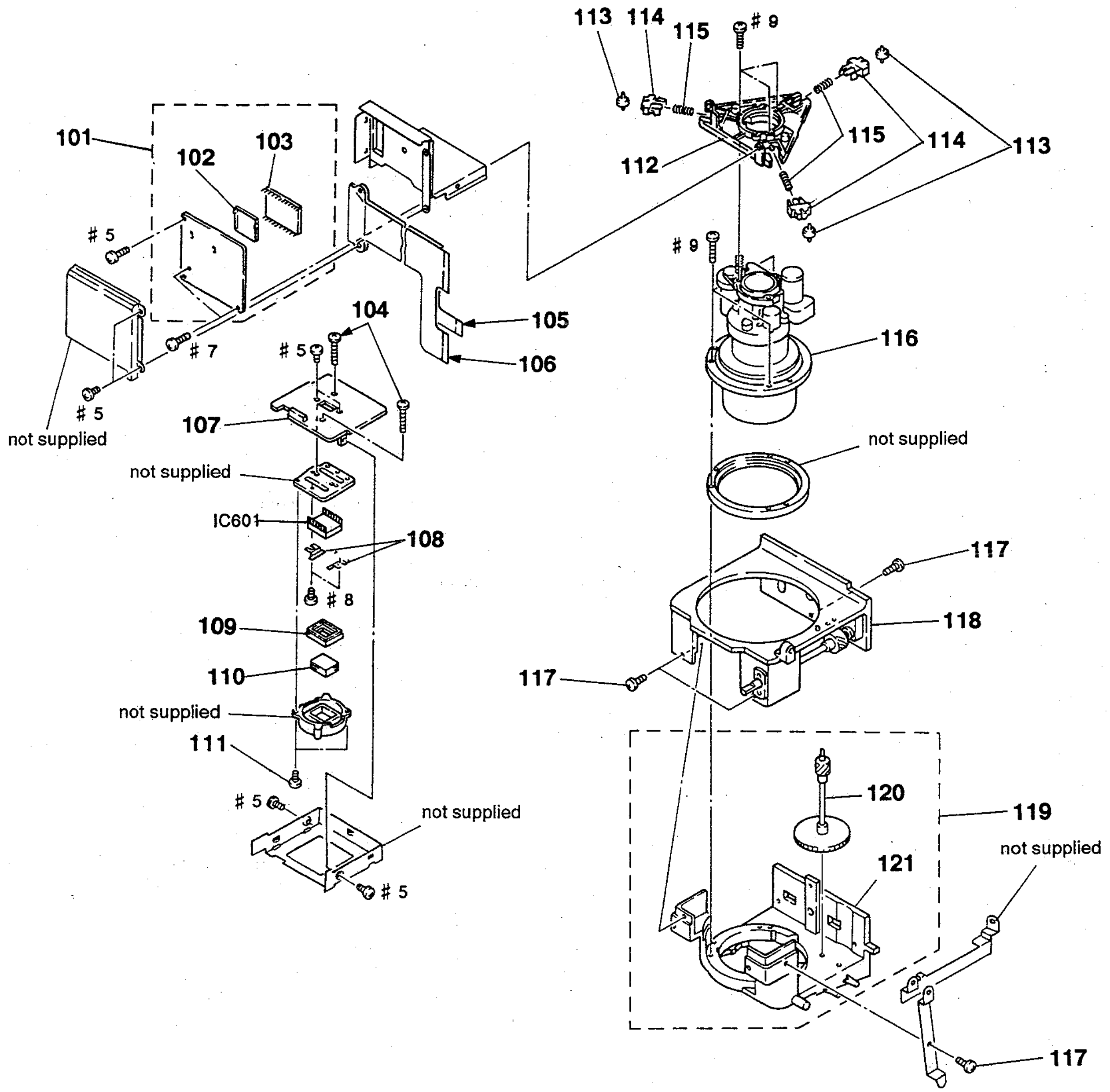


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
51	X-3940-413-1	COVER ASSY, FLUORESCENT LAMP	
52	X-3940-360-2	CASE ASSY, LIGHT	
53	1-518-679-11	FLUORESCENT TUBE	
54	* A-7071-375-A	FR-62 BOARD, COMPLETE	
55	* X-3940-409-1	GUARD ASSY, LAMP	
56	1-466-504-11	INVERTER, DC-AC	
57	3-943-577-01	RING, TRIGGER	
58	3-831-441-11	CUSHION	
59	* A-7062-656-A	FA-1 BOARD, COMPLETE	
60	3-941-860-01	KNOB, JOY STICK	
61	3-941-858-01	BLIND, JOY STICK	
62	* A-7062-657-A	JS-22 BOARD, COMPLETE	
63	1-466-230-21	CONVERTER UNIT, D/D	
64	⚠ 1-551-478-00	CORD, POWER	
65	* A-7062-658-A	PJ-43 BOARD, COMPLETE	
66	⚠ 1-413-623-12	POWER BLOCK	
67	3-941-676-01	KNOB, MICROPHONE	
68	* A-7062-655-A	MC-65 BOARD, COMPLETE	
69	* X-3940-541-1	SHIELD (UPPER) ASSY, VOL PCB	
70	3-941-851-11	PANEL (MICROPHONE JACK)	
71	A-7068-193-A	MX-7PH BOARD, COMPLETE (HIC)	
72	* A-7062-661-A	VC-85 BOARD, COMPLETE	
73	3-942-525-01	BLIND (1), KNOB	
74	3-941-670-01	KNOB, ROTARY	
75	X-3940-765-1	PANEL ASSY, SIDE	
76	3-831-441-XX	CUSHION (5)	
S901	⚠ 1-572-810-11	SWITCH, SEESAW (AC POWER)	

5-3. LENS


101
102
103
# 5
# 7
# 5
not supplied
104
# 5
105
106
107
not supplied
IC601
108
# 8
109
110
not supplied
111
# 5
not supplied
# 5
113
114
115
# 9
115
114
113
112
# 9
116
not supplied
117
118
117
120
119
not supplied
121
117

Ref. No.	Part No.	Description	Remark
101	* A-7062-660-A	GE-10 BOARD, COMPLETE	
102	* X-3739-811-1	PLATE ASSY, SHIELD, CD	
103	A-7068-165-A	DT-77B BOARD, COMPLETE (HIC)	
104	3-747-151-01	SCREW (2X16)	
105	1-638-487-11	FP-412 FLEXIBLE BOARD	
106	1-638-486-11	FP-378 FLEXIBLE BOARD	
107	* A-7062-659-A	CD-52 BOARD, COMPLETE	
108	* 3-725-175-01	STOPPER, CCD	
109	* 3-725-177-01	RUBBER, SEAL	
110	1-547-381-12	FILTER BLOCK, OPTICAL	
111	3-738-519-11	SCREW (M2X3), +B	

Ref. No.	Part No.	Description	Remark
112	3-942-011-01	HOLDER (2), FP	
113	3-941-850-01	ROLLER (SLIDE)	
114	3-941-664-01	SLIDE (HOLDER)	
115	3-941-841-01	SPRING (2), COMPRESSION	
116	1-547-480-11	LENS, ZOOM	
117	3-727-903-01	SCREW (2X5), TAPPING, + B	
118	X-3940-515-1	LENS (BL) (A) ASSY	
119	X-3940-514-1	LENS (BL) (B) ASSY	
120	X-3940-516-1	GEAR ASSY	
121	3-943-257-01	LENS (BL) (B)	
IC601	8-752-604-56	IC ICX038AN-1 (CCD IMAGER)	

CD-52

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref.No.	Part No.	Description			Remark
	* A-7062-659-A	CD-52 BOARD, COMPLETE			
		*********************			
		(Ref.No 1,000 Series)			
		< CAPACITOR >			
C601	1-126-200-11	ELECT CHIP	10uF	20%	35V
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C604	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C605	1-126-607-11	ELECT CHIP	47uF	20%	4V
C607	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C622	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C623	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C626	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C643	1-126-193-11	ELECT	1uF	20%	50V
C644	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C647	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C648	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C649	1-126-602-11	ELECT CHIP	3.3uF	20%	50V
		< CONNECTOR >			
CN602	* 1-569-077-11	CONNECTOR, BOARD TO BOARD(F) 18P			
		< DIODE >			
D623	8-719-404-46	DIODE MA110			
D624	8-719-404-32	DIODE MA141WA			
D627	8-719-404-52	DIODE MA143			
D628	8-719-404-46	DIODE MA110			
		< COIL >			
L601	1-412-032-11	INDUCTOR, CHIP 100uH			
		< TRANSISTOR >			
Q601	8-765-420-02	TRANSISTOR 2SK300-3			
Q622	8-729-403-42	TRANSISTOR XN1401			
Q623	8-729-421-23	TRANSISTOR XN1216			
Q625	8-729-905-35	TRANSISTOR 2SC4081-R			
Q626	8-729-402-84	TRANSISTOR XN4601			
		< RESISTOR >			
R601	1-216-848-11	METAL CHIP	180K	5%	1/16W
R602	1-216-838-11	METAL CHIP	27K	5%	1/16W
R603	1-216-816-11	METAL CHIP	390	5%	1/16W
R604	1-216-809-11	METAL CHIP	100	5%	1/16W
R605	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R622	1-216-857-11	METAL CHIP	1M	5%	1/16W
R625	1-216-845-11	METAL CHIP	100K	5%	1/16W
R628	1-216-843-11	METAL CHIP	68K	5%	1/16W
R629	1-216-833-11	METAL CHIP	10K	5%	1/16W
R630	1-216-835-11	METAL CHIP	15K	5%	1/16W
R631	1-216-844-11	METAL CHIP	82K	5%	1/16W
R632	1-216-844-11	METAL CHIP	82K	5%	1/16W
R633	1-216-850-11	METAL CHIP	270K	5%	1/16W
R636	1-216-833-11	METAL CHIP	10K	5%	1/16W
R638	1-216-836-11	METAL CHIP	18K	5%	1/16W
R639	1-216-837-11	METAL CHIP	22K	5%	1/16W
R640	1-216-837-11	METAL CHIP	22K	5%	1/16W
R669	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R671	1-216-845-11	METAL CHIP	100K	5%	1/16W
R680	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R693	1-216-821-11	METAL CHIP	1K	5%	1/16W

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Ref.No.	Part No.	Description	Remark
	* A-7062-656-A	FA-1 BOARD, COMPLETE	
		********************	
		(Ref.No 2,000 Series)	
		< CAPACITOR >	
C151	1-135-159-21	TANTALUM CHIP 10uF 10% 16V	
C171	1-135-159-21	TANTALUM CHIP 10uF 20% 16V	
		< CONNECTOR >	
CN101	1-568-969-11	PIN, CONNECTOR (PC BOARD) 11P	
CN171	1-566-757-11	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D105	8-719-928-15	DIODE SLM-13DW-T-147	
D151	8-719-404-46	DIODE MA110	
D152	8-719-404-46	DIODE MA110	
D153	8-719-404-46	DIODE MA110	
D171	8-719-404-46	DIODE MA110	
		< IC >	
IC151	8-759-234-77	IC TC4S66F-TE85L	
		< TRANSISTOR >	
Q104	8-729-907-00	TRANSISTOR DTC114EU	
Q151	8-729-905-18	TRANSISTOR DTC144EU	
Q171	8-729-106-60	TRANSISTOR 2SB1115A	
Q172	8-729-905-18	TRANSISTOR DTC144EU	
		< RESISTOR >	
R119	1-216-635-11	METAL CHIP 220 0.5% 1/10W	
R151	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R152	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R153	1-216-854-11	METAL CHIP 560K 5% 1/16W	
R171	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R172	1-216-821-11	METAL CHIP 1K 5% 1/16W	
		< SWITCH >	
S101	1-571-787-11	SWITCH, TACTILE (PUSH AUTO)	
S109	1-571-787-11	SWITCH, TACTILE (FOCUS)	
S110	1-571-787-11	SWITCH, TACTILE (FOCUS)	
S111	1-571-787-11	SWITCH, TACTILE (ZOOM)	
S112	1-571-787-11	SWITCH, TACTILE (ZOOM)	
S115	1-571-787-11	SWITCH, TACTILE (ON/OFF)	

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	* A-7071-375-A	FR-62 BOARD, COMPLETE	
		********************	
		(Ref.No 3,000 Series)	
		< CONNECTOR >	
CN062	1-506-468-11	CONNECTOR 3P, MALE	

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Ref.No.	Part No.	Description	Remark
	* A-7062-660-A	GE-10 BOARD, COMPLETE	
		********************	
		(Ref.No 4,000 Series)	
	A-7068-165-A	DT-77B BOARD, COMPLETE (HIC)	
		< CAPACITOR >	
C621	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C624	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C625	1-135-166-21	TANTALUM CHIP 47uF 10% 10V	
C627	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C628	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C629	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C630	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C631	1-162-638-11	CERAMIC CHIP 1uF 16V	
C632	1-135-166-21	TANTALUM CHIP 47uF 10% 10V	
C642	1-162-945-11	CERAMIC CHIP 22PF 5% 50V	
C646	1-162-945-11	CERAMIC CHIP 22PF 5% 50V	
C650	1-162-945-11	CERAMIC CHIP 22PF 5% 50V	
C687	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
C689	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
C862	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C868	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C869	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
		< CONNECTOR >	
CN603	1-566-757-11	PIN, CONNECTOR (PC BOARD) 2P	
CN604	1-568-335-11	CONNECTOR, BOARD TO BOARD 18P	
CN606	1-566-757-11	PIN, CONNECTOR (PC BOARD)	
CN852	1-565-880-11	PIN, CONNECTOR (PC BOARD) 8P	
CN853	1-565-874-11	PIN, CONNECTOR (PC BOARD) 2P	
CN854	1-565-874-11	PIN, CONNECTOR (PC BOARD) 2P	
CN855	* 1-565-876-11	PIN, CONNECTOR (PC BOARD) 4P	
CN856	1-565-876-11	PIN, CONNECTOR (PC BOARD) 4P	
		< DIODE >	
D621	8-719-404-46	DIODE MA110	
D622	8-719-404-46	DIODE MA110	
D631	8-719-404-46	DIODE MA110	
		< IC >	
IC621	8-752-326-08	IC CXD1159Q-T3	
		< COIL >	
L621	1-412-029-11	INDUCTOR, CHIP 10uH	
L622	1-412-029-11	INDUCTOR, CHIP 10uH	
L682	1-410-369-11	INDUCTOR, CHIP 1uH	
L683	1-410-369-11	INDUCTOR, CHIP 1uH	
L684	1-410-369-11	INDUCTOR, CHIP 1uH	
L651	1-410-369-11	INDUCTOR, CHIP 1uH	
L652	1-410-369-11	INDUCTOR, CHIP 1uH	
L653	1-410-369-11	INDUCTOR, CHIP 1uH	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q621	8-729-402-84	TRANSISTOR XN4601	
Q624	8-729-402-84	TRANSISTOR XN4601	
Q627	8-729-402-84	TRANSISTOR XN4601	
Q628	8-729-905-35	TRANSISTOR 2SC4081-R	
Q633	8-729-402-84	TRANSISTOR XN4601	
		< RESISTOR >	
R606	1-216-864-11	METAL CHIP 0	
R611	1-216-864-11	METAL CHIP 0	
R617	1-216-833-11	METAL CHIP 10K 5%	1/16W
R618	1-216-821-11	METAL CHIP 1K 5%	1/16W
R620	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R623	1-216-833-11	METAL CHIP 10K 5%	1/16W
R624	1-216-839-11	METAL CHIP 33K 5%	1/16W
R626	1-216-837-11	METAL CHIP 22K 5%	1/16W
R627	1-216-820-11	METAL CHIP 820 5%	1/16W
R634	1-216-837-11	METAL CHIP 22K 5%	1/16W
R635	1-216-837-11	METAL CHIP 22K 5%	1/16W
R637	1-216-837-11	METAL CHIP 22K 5%	1/16W
R641	1-216-833-11	METAL CHIP 10K 5%	1/16W
R642	1-216-842-11	METAL CHIP 56K 5%	1/16W
R643	1-216-843-11	METAL CHIP 68K 5%	1/16W
R644	1-216-837-11	METAL CHIP 22K 5%	1/16W
R645	1-216-837-11	METAL CHIP 22K 5%	1/16W
R646	1-216-821-11	METAL CHIP 1K 5%	1/16W
R647	1-216-813-11	METAL CHIP 220 5%	1/16W
R648	1-216-848-11	METAL CHIP 180K 5%	1/16W
R649	1-216-815-11	METAL CHIP 330 5%	1/16W
R653	1-216-864-11	METAL CHIP 0	
R672	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R673	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R674	1-216-864-11	METAL CHIP 0	
R675	1-216-821-11	METAL CHIP 1K 5%	1/16W
R676	1-216-842-11	METAL CHIP 56K 5%	1/16W
R677	1-216-835-11	METAL CHIP 15K 5%	1/16W
R678	1-216-833-11	METAL CHIP 10K 5%	1/16W
R679	1-216-833-11	METAL CHIP 10K 5%	1/16W
R681	1-216-821-11	METAL CHIP 1K 5%	1/16W
R682	1-216-821-11	METAL CHIP 1K 5%	1/16W
R683	1-216-821-11	METAL CHIP 1K 5%	1/16W
R685	1-216-821-11	METAL CHIP 1K 5%	1/16W
R687	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R688	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R689	1-216-821-11	METAL CHIP 1K 5%	1/16W
R690	1-216-821-11	METAL CHIP 1K 5%	1/16W
R691	1-216-821-11	METAL CHIP 1K 5%	1/16W
R692	1-216-821-11	METAL CHIP 1K 5%	1/16W
R694	1-216-821-11	METAL CHIP 1K 5%	1/16W
R695	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R696	1-216-821-11	METAL CHIP 1K 5%	1/16W
R697	1-216-821-11	METAL CHIP 1K	
R698	1-216-825-11	METAL CHIP 2.2K 5%	1/16W

Ref. No.	Part No.	Description	Remark
R699	1-216-821-11	METAL CHIP 1K 5%	1/16W
R700	1-216-833-11	METAL CHIP 10K 5%	1/16W
R701	1-216-833-11	METAL CHIP 10K 5%	1/16W
R879	1-216-816-11	METAL CHIP 390 5%	1/16W
R880	1-216-816-11	METAL CHIP 390 5%	1/16W
		< CRYSTAL >	
X621	1-567-898-11	CRYSTAL	

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* A-7062-657-A JS-22 BOARD, COMPLETE
****
(Ref.No 5,000 Series)

		< CONNECTOR >	
CN102	1-568-964-11	PIN, CONNECTOR (PC BOARD) 6P	
		< VARIABLE RESISTOR >	
RV103	1-237-423-21	RES, VAR, CARBON 1K/1K (COLOR CORRECT)	

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* A-7062-655-A MC-65 BOARD, COMPLETE
****
(Ref.No 8,000 Series)

* 3-941-954-01 SHIELD (LOWER), VOL PC BOARD
3-942-526-01 BLIND (2), KNOB

		< CAPACITOR >	
C001	1-126-246-11	ELECT CHIP 220uF 20%	4V
C002	1-126-193-11	ELECT 1uF 20%	50V
C003	1-126-601-11	ELECT 2.2uF 20%	50V
C004	1-162-953-11	CERAMIC CHIP 100PF 5%	50V
C010	1-164-361-11	CERAMIC CHIP 0.047uF	16V
C261	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C262	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C268	1-126-206-11	ELECT CHIP 100uF 20%	6.3V
C271	1-124-779-00	ELECT CHIP 10uF 20%	16v
C272	1-162-953-11	CERAMIC CHIP 100PF 5%	50V
C273	1-126-193-11	ELECT 1uF 20%	50V
C274	1-126-204-11	ELECT CHIP 47uF 20%	16V
C275	1-126-400-11	ELECT 22uF 20%	35V
C276	1-126-395-11	ELECT 22uF 20%	16V
		< CONNECTOR >	
CN004	1-568-961-11	PIN, CONNECTOR (PC BOARD) 3P	

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D005	8-719-420-15	DIODE MA8082-M	
D006	8-719-420-15	DIODE MA8082-M	
D261	8-719-404-46	DIODE MA110	
D262	8-719-404-46	DIODE MA110	
		< IC >	
IC206	8-759-981-58	IC RC2043MD	
		< JACK >	
J003	1-507-834-31	JACK (MIC IN)	
		< COIL >	
L261	1-412-032-11	INDUCTOR, CHIP 100uH	
L262	1-410-369-11	INDUCTOR, CHIP 1uH	
L263	1-410-369-11	INDUCTOR, CHIP 1uH	
		< TRANSISTOR >	
Q261	8-729-905-35	TRANSISTOR 2SC4081-R	
Q262	8-729-905-12	TRANSISTOR DTA144EU	
Q263	8-729-920-XX	TRANSISTOR DTA114EU	
Q264	8-729-905-18	TRANSISTOR DTC144EU	
		< RESISTOR >	
R001	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R002	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R003	1-216-820-11	METAL CHIP 820 5% 1/16W	
R266	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R268	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R269	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R270	1-216-805-11	METAL CHIP 47 5% 1/16W	
R271	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R272	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R273	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R275	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R276	1-216-833-11	METAL CHIP 10K 5% 1/16W	
		< VARIABLE RESISTOR >	
RV001	1-238-047-11	RES, VAR, CARBON 10K (MIC LEVEL)	

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Ref. No.	Part No.	Description	Remark
	* A-7062-658-A	PJ-43 BOARD, COMPLETE ******************** (Ref. No 6,000 Series)	
		< CAPACITOR >	
C005	1-162-974-11	CERAMIC CHIP 0.01uF 50V	
C006	1-164-361-11	CERAMIC CHIP 0.047uF 16V	
C007	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C008	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
C009	1-162-995-11	CERAMIC CHIP 0.022uF 50V	
		< CONNECTOR >	
CN001	1-568-968-11	PIN, CONNECTOR (PC BOARD) 10P	
CN003	1-568-961-11	PIN, CONNECTOR (PC BOARD) 3P	
		< DIODE >	
D001	8-719-800-76	DIODE 1SS226	
D002	8-719-800-76	DIODE 1SS226	
D003	8-719-800-76	DIODE 1SS226	
D004	8-719-106-43	DIODE RD9.1M-B1	
D007	8-719-106-43	DIODE RD9.1M-B1	
D008	8-719-106-43	DIODE RD9.1M-B1	
D009	8-719-106-43	DIODE RD9.1M-B1	
D010	8-719-106-43	DIODE RD9.1M-B1	
D011	8-719-106-43	DIODE RD9.1M-B1	
D012	8-719-106-43	DIODE RD9.1M-B1	
D013	8-719-106-43	DIODE RD9.1M-B1	
D014	8-719-106-43	DIODE RD9.1M-B1	
		< JACK >	
J001	1-566-847-41	CONNECTOR, (S) TERMINAL 4P (S VIDEO OUT)	
J002	1-537-005-21	JACK BOARD (OUTPUT)	
		< COIL >	
L001	1-410-369-11	INDUCTOR CHIP 1uH	
		< RESISTOR >	
R274	1-216-821-11	METAL CHIP 1K 5% 1/16W	

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VC-85

* A-7062-661-A VC-85 BOARD, COMPLETE
****
(Ref.No 7,000 Series)

A-7068-193-A MX-7PH BOARD, COMPLETE (HIC)

7-685-534-19 SCREW +BTP 2.6X8 TYPE2 N-S

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C100	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C102	1-124-779-00	ELECT CHIP	10uF	20%	16v
C103	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C104	1-162-638-11	CERAMIC CHIP	1uF		16V
C105	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C106	1-126-601-11	ELECT	2.2uF	20%	50V
C161	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C201	1-135-158-21	TANTALUM CHIP	15uF	20%	4V
C202	1-163-034-00	CERAMIC CHIP	0.033uF		50V
C203	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C204	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C205	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C206	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C207	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C208	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C209	1-135-158-21	TANTALUM CHIP	15uF	20%	4V
C210	1-126-246-11	ELECT CHIP	220uF	20%	4V
C211	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C212	1-126-246-11	ELECT CHIP	220uF	20%	4V
C213	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C214	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C215	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C216	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C217	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C218	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C219	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C220	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C221	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C222	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C223	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C224	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C225	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C227	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C228	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C241	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C242	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C243	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C244	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C245	1-124-779-00	ELECT CHIP	10uF	20%	16v
C246	1-124-779-00	ELECT CHIP	10uF	20%	16v
C247	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C248	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C249	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C250	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C266	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C506	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C507	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C508	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C509	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C510	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C511	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C512	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C515	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C521	1-135-179-21	TANTAL. CHIP	2.2uF	20%	16V
C522	1-135-179-21	TANTAL. CHIP	2.2uF	20%	16V
C523	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C524	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C575	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C576	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C577	1-164-173-11	CERAMIC CHIP	0.0039uF	10%	50V
C578	1-124-779-00	ELECT CHIP	10uF	20%	16v
C579	1-162-638-11	CERAMIC CHIP	1uF		16V
C580	1-162-638-11	CERAMIC CHIP	1uF		16V
C641	1-162-942-11	CERAMIC CHIP	12PF	5%	50V
C703	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C704	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C705	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C706	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C707	1-162-638-11	CERAMIC CHIP	1uF		16V
C708	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C709	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C710	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C711	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C712	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C713	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C714	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C716	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C717	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C718	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C719	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C720	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C721	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C722	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C723	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C724	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C725	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C726	1-162-943-11	CERAMIC CHIP	15PF	5%	50V
C727	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C728	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C731	1-126-204-11	ELECT CHIP	47uF	20%	16V
C734	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C735	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C736	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C737	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C738	1-162-941-11	CERAMIC CHIP	10PF	0. 5PF	50V
C739	1-164-005-11	CERAMIC CHIP	0. 47uF		25V
C740	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C741	1-162-944-11	CERAMIC CHIP	18PF	5%	50V
C742	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C743	1-126-206-11	ELECT CHIP	100uF	20%	6. 3V
C744	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C746	1-164-005-11	CERAMIC CHIP	0. 47uF		25V
C747	1-162-941-11	CERAMIC CHIP	10PF	0. 5PF	50V
C748	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C749	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C750	1-162-944-11	CERAMIC CHIP	18PF	5%	50V
C751	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C752	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C753	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C754	1-162-638-11	CERAMIC CHIP	1uF		16V
C755	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C757	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C759	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C760	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C764	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C765	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C781	1-162-966-11	CERAMIC CHIP	0. 0022uF	10%	50V
C782	1-162-966-11	CERAMIC CHIP	0. 0022uF	10%	50V
C783	1-162-966-11	CERAMIC CHIP	0. 0022uF	10%	50V
C801	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C802	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C803	1-162-638-11	CERAMIC CHIP	1uF		16V
C804	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C806	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C807	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C808	1-135-072-21	TANTALUM CHIP	0. 22uF	10%	35V
C809	1-124-779-00	ELECT CHIP	10uF	20%	16v
C810	1-126-602-11	ELECT CHIP	3. 3uF	20%	50V
C811	1-126-602-11	ELECT CHIP	3. 3uF	20%	50V
C812	1-126-602-11	ELECT CHIP	3. 3uF	20%	50V
C813	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C851	1-162-638-11	CERAMIC CHIP	1uF		16V
C852	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C853	1-162-995-11	CERAMIC CHIP	0. 022uF		50V
C854	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C855	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C856	1-162-970-11	CERAMIC CHIP	0. 01uF	10%	25V
C858	1-162-966-11	CERAMIC CHIP	0. 0022uF	10%	50V
C859	1-162-995-11	CERAMIC CHIP	0. 022uF		50V
C860	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C861	1-124-779-00	ELECT CHIP	10uF	20%	16v
C863	1-163-075-00	CERAMIC CHIP	0. 047uF		50V
C864	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C865	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C867	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C903	1-162-638-11	CERAMIC CHIP	1uF		16V
C906	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C907	1-135-180-21	TANTALUM CHIP	3. 3uF	20%	6. 3V
C909	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C910	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C911	1-126-205-11	ELECT CHIP	47uF	20%	6. 3V
C912	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C914	1-135-157-21	TANTALUM CHIP	10uF	20%	6. 3V
C915	1-162-941-11	CERAMIC CHIP	10PF	0. 5PF	50V
C916	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C917	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C918	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C919	1-135-157-21	TANTALUM CHIP	10uF	20%	6. 3V
C920	1-162-974-11	CERAMIC CHIP	0. 01uF		50V
C921	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C922	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C923	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C924	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C925	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C930	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C931	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C932	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C933	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C934	1-162-966-11	CERAMIC CHIP	0. 0022uF	10%	50V
C935	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C936	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C937	1-135-145-11	TANTALUM CHIP	0. 47uF	10%	25V
C938	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C939	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C940	1-135-155-21	TANTALUM CHIP	4. 7uF	10%	16V
C941	1-135-145-11	TANTALUM CHIP	0. 47uF	10%	25V
C942	1-164-156-11	CERAMIC CHIP	0. 1uF		25V
C951	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C952	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C953	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C954	1-162-964-11	CERAMIC CHIP	0. 001uF	10%	50V
C955	1-164-156-11	CERAMIC CHIP	0. 1uF		25V

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Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN201	* 1-565-883-11	PIN, CONNECTOR (PC BOARD) 11P	
CN203	1-506-482-11	CONNECTOR 3P, MALE	
CN204	* 1-565-875-11	PIN, CONNECTOR (PC BOARD) 3P	
CN208	* 1-565-882-11	PIN, CONNECTOR (PC BOARD) 10P	
CN209	1-566-760-11	PIN, CONNECTOR (PC BOARD) 5P	
CN701	1-565-877-11	PIN, CONNECTOR (PC BOARD) 5P	
CN702	* 1-565-876-11	PIN, CONNECTOR (PC BOARD) 4P	
CN703	1-565-878-11	PIN, CONNECTOR (PC BOARD) 6P	
CN705	1-580-106-21	CONNECTOR, FPC 28P	
CN706	1-569-478-21	CONNECTOR, FPC 20P	
CN707	1-566-527-11	CONNECTOR, FPC (ZIF) 11P	
CN902	* 1-565-543-11	PIN, CONNECTOR (PC BOARD) 4P	
		< DIODE >	
D101	8-719-404-35	DIODE MA141WK	
D102	8-719-404-35	DIODE MA141WK	
D103	8-719-981-33	DIODE GL1HY-51	
D104	8-719-981-33	DIODE GL1HY-51	
D107	8-719-404-46	DIODE MA110	
D108	8-719-404-35	DIODE MA141WK	
D201	8-719-404-46	DIODE MA110	
D202	8-719-404-46	DIODE MA110	
D203	8-719-400-18	DIODE MA152WK	
D575	8-719-404-52	DIODE MA143	
D576	8-719-404-46	DIODE MA110	
D801	8-719-404-32	DIODE MA141WA	
D802	8-719-404-46	DIODE MA110	
D803	8-719-404-46	DIODE MA110	
D852	8-719-404-46	DIODE MA110	
D901	8-719-404-46	DIODE MA110	
D902	8-719-404-32	DIODE MA141WA	
		< FILTER >	
FL701	1-236-368-11	FILTER, LOW PASS	
FL702	1-415-634-21	DL (LC)	
FL703	1-236-187-11	FILTER, LOW PASS	
FL704	1-236-375-11	LPF, YDL	
FL705	1-236-192-11	FILTER, LOW PASS	
FL707	1-415-638-11	DL, LC	
FL708	1-415-635-21	DL (LC)	
FL901	1-236-209-11	FILTER, LOW PASS	
		< IC >	
IC101	8-759-152-80	IC uPD7508BGB	
IC102	8-759-937-56	IC S-8054ALB-LM	
IC103	8-759-926-28	IC SN74HC174NS	
IC201	8-752-009-51	IC CX20095A	
IC202	8-759-504-47	IC TL026CPS	
IC203	8-759-983-69	IC LM358PS	
IC204	8-759-011-65	IC MC74HC4053F	
IC205	8-759-937-56	IC S-8054ALB-LM-S	
IC207	8-759-502-36	IC S-81350HG	
IC575	8-759-983-69	IC LM358PS	
IC576	8-759-030-74	IC SC14S66F	
IC577	8-759-030-74	IC SC14S66F	
IC578	8-759-030-74	IC SC14S66F	
IC702	8-752-034-21	IC CXA1339R	
IC703	8-759-946-00	IC MB88341PFV	
IC704	8-759-300-71	IC MC14053BF	
IC705	8-752-033-34	IC CXA1072R	
IC706	8-759-946-00	IC MB88341PFV	
IC707	8-759-300-71	IC MC14053BFP	
IC708	8-759-300-71	IC MC14053BFP	
IC709	8-759-300-71	IC MC14053BFP	
IC710	8-759-100-93	IC uPC393G2	
IC711	8-759-300-71	IC MC14053BFP	
IC712	8-759-100-93	IC uPC393G2	
IC713	8-759-200-67	IC TC4001BF	
IC714	8-759-300-71	IC MC14053BFP	
IC715	8-759-100-93	IC uPC393G2	
IC716	8-759-300-71	IC MC14053BFP	
IC717	8-759-300-71	IC MC14053BFP	
IC720	8-759-234-77	IC TC4S66F	
IC801	8-759-937-56	IC S-8054ALB-LM-S	
IC802	8-759-037-60	IC MC68HC05N4-SC406667	
IC803	8-759-983-74	IC LM324NS	
IC804	8-759-008-67	IC MC14066BF	
IC851	8-759-500-11	IC MM1036XF	
IC852	8-759-983-69	IC LM358PS	
IC853	8-759-030-35	IC MPC1725M	
IC854	8-759-983-74	IC LM324NS	
IC901	8-752-334-49	IC CXD1172AM	
IC902	8-759-946-00	IC MB88341PFV	
IC903	8-759-940-45	IC S-8054HN-CB	
IC904	8-752-326-18	IC CXD1204R	
IC905	8-759-031-86	IC MC68HC05C4-SC411531	
IC906	8-759-300-71	IC MC14053BFP	
IC907	8-759-983-74	IC LM324NS	
IC908	8-759-009-06	IC MC14052BF	
		< JACK >	
J202	1-565-276-21	JACK, ULTRA SMALL 1P	

Ref.No.	Part No.	Description	Remark
		< COIL >	
L101	1-410-393-11	INDUCTOR CHIP 100uH	
L201	1-410-389-31	INDUCTOR CHIP 47uH	
L211	1-412-026-11	INDUCTOR CHIP 1uH	
L212	1-412-026-11	INDUCTOR CHIP 1uH	
L241	1-412-032-11	INDUCTOR CHIP 100uH	
L242	1-412-032-11	INDUCTOR CHIP 100uH	
L623	1-410-381-11	INDUCTOR CHIP 10uH	
L701	1-412-031-11	INDUCTOR CHIP 47uH	
L702	1-412-031-11	INDUCTOR CHIP 47uH	
L703	1-410-392-11	INDUCTOR CHIP 82uH	
L704	1-410-369-11	INDUCTOR CHIP 1uH	
L705	1-410-369-11	INDUCTOR CHIP 1uH	
L706	1-410-369-11	INDUCTOR CHIP 1uH	
L707	1-412-031-11	INDUCTOR CHIP 47uH	
L901	1-410-369-11	INDUCTOR CHIP 1uH	
L902	1-410-655-31	INDUCTOR CHIP 120uH	
		< TRANSISTOR >	
Q101	8-729-905-18	TRANSISTOR DTC144EU	
Q102	8-729-907-00	TRANSISTOR DTC114EU	
Q103	8-729-907-00	TRANSISTOR DTC114EU	
Q105	8-729-905-18	TRANSISTOR DTC144EU	
Q201	8-729-905-35	TRANSISTOR 2SC4081-R	
Q202	8-729-905-35	TRANSISTOR 2SC4081-R	
Q203	8-729-905-35	TRANSISTOR 2SC4081-R	
Q204	8-729-905-35	TRANSISTOR 2SC4081-R	
Q205	8-729-905-35	TRANSISTOR 2SC4081-R	
Q206	8-729-905-35	TRANSISTOR 2SC4081-R	
Q207	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q208	8-729-905-35	TRANSISTOR 2SC4081-R	
Q209	8-729-106-60	TRANSISTOR 2SB1115A	
Q210	8-729-905-35	TRANSISTOR 2SC4081-R	
Q211	8-729-905-23	TRANSISTOR 2SA1576-R	
Q212	8-729-402-84	TRANSISTOR XN4601	
Q213	8-729-905-35	TRANSISTOR 2SC4081-R	
Q214	8-729-905-23	TRANSISTOR 2SA1576-R	
Q215	8-729-905-35	TRANSISTOR 2SC4081-R	
Q216	8-729-905-35	TRANSISTOR 2SC4081-R	
Q574	8-729-905-35	TRANSISTOR 2SC4081-R	
Q575	8-729-905-35	TRANSISTOR 2SC4081-R	
Q576	8-729-905-35	TRANSISTOR 2SC4081-R	
Q577	8-729-116-05	TRANSISTOR 2SK160	
Q578	8-729-905-18	TRANSISTOR DTC144EU	
Q579	8-729-905-35	TRANSISTOR 2SC4081-R	
Q580	8-729-402-84	TRANSISTOR XN4601	
Q581	8-729-905-18	TRANSISTOR DTC144EU	
Q582	8-729-905-35	TRANSISTOR 2SC4081-R	
Q702	8-729-905-23	TRANSISTOR 2SA1576-R	

Ref.No.	Part No.	Description	Remark
Q703	8-729-905-35	TRANSISTOR 2SC4081-R	
Q704	8-729-905-35	TRANSISTOR 2SC4081-R	
Q705	8-729-905-35	TRANSISTOR 2SC4081-R	
Q706	8-729-402-78	TRANSISTOR XN6401	
Q707	8-729-905-35	TRANSISTOR 2SC4081-R	
Q708	8-729-403-10	TRANSISTOR XN6215	
Q709	8-729-905-35	TRANSISTOR 2SC4081-R	
Q710	8-729-905-35	TRANSISTOR 2SC4081-R	
Q711	8-729-905-35	TRANSISTOR 2SC4081-R	
Q712	8-729-402-84	TRANSISTOR XN4601	
Q713	8-729-402-81	TRANSISTOR XN4501	
Q714	8-729-402-84	TRANSISTOR XN4601	
Q715	8-729-905-35	TRANSISTOR 2SC4081-R	
Q716	8-729-905-18	TRANSISTOR DTC144EU	
Q717	8-729-905-23	TRANSISTOR 2SA1576-R	
Q718	8-729-905-35	TRANSISTOR 2SC4081-R	
Q719	8-729-905-35	TRANSISTOR 2SC4081-R	
Q720	8-729-905-23	TRANSISTOR 2SA1576-R	
Q721	8-729-905-35	TRANSISTOR 2SC4081-R	
Q722	8-729-905-23	TRANSISTOR 2SA1576-R	
Q723	8-729-905-35	TRANSISTOR 2SC4081-R	
Q724	8-729-905-35	TRANSISTOR 2SC4081-R	
Q725	8-729-907-00	TRANSISTOR DTC114EU	
Q727	8-729-905-23	TRANSISTOR 2SA1576-R	
Q728	8-729-905-18	TRANSISTOR DTC144EU	
Q801	8-729-403-10	TRANSISTOR XN6215	
Q802	8-729-403-07	TRANSISTOR XN1213	
Q803	8-729-905-35	TRANSISTOR 2SC4081-R	
Q804	8-729-805-42	TRANSISTOR 2SC3859	
Q805	8-729-805-42	TRANSISTOR 2SC3859	
Q806	8-729-805-42	TRANSISTOR 2SC3859	
Q807	8-729-402-78	TRANSISTOR XN6401	
Q851	8-729-403-07	TRANSISTOR XN1213	
Q852	8-729-905-23	TRANSISTOR 2SA1576-R	
Q853	8-729-402-84	TRANSISTOR XN4601	
Q854	8-729-106-60	TRANSISTOR 2SB1115A	
Q855	8-729-905-35	TRANSISTOR 2SC4081-R	
Q856	8-729-905-15	TRANSISTOR DTC144WU	
Q858	8-729-402-84	TRANSISTOR XN4601	
Q859	8-729-905-18	TRANSISTOR DTC144EU	
Q860	8-729-905-18	TRANSISTOR DTC144EU	
Q901	8-729-402-84	TRANSISTOR XN4601	
Q902	8-729-403-10	TRANSISTOR XN6215	
Q903	8-729-905-23	TRANSISTOR 2SA1576-R	
Q904	8-729-905-18	TRANSISTOR DTC144EU	
Q906	8-729-905-35	TRANSISTOR 2SC4081-R	
Q907	8-729-905-35	TRANSISTOR 2SC4081-R	
Q909	8-729-905-35	TRANSISTOR 2SC4081-R	

Ref. No.	Part No.	Description				Remark
Q910	8-729-905-35	TRANSISTOR	2SC4081-R			
Q911	8-729-402-19	TRANSISTOR	XN6501			
Q914	8-729-905-18	TRANSISTOR	DTC144EU			
Q915	8-729-905-18	TRANSISTOR	DTC144EU			
Q916	8-729-905-18	TRANSISTOR	DTC144EU			
Q918	8-729-905-18	TRANSISTOR	DTC144EU			
Q919	8-729-905-18	TRANSISTOR	DTC144EU			
Q920	8-729-402-84	TRANSISTOR	XN4601			
		< RESISTOR >				
R101	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R102	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R103	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R104	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R105	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R106	1-216-849-11	METAL CHIP	220K	5%	1/16W	
R107	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R108	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R109	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R112	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R113	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R114	1-216-851-11	METAL CHIP	330K	5%	1/16W	
R115	1-216-864-11	METAL CHIP	0			
R116	1-216-864-11	METAL CHIP	0			
R117	1-216-635-11	METAL CHIP	220	0.5%	1/10W	
R118	1-216-635-11	METAL CHIP	220	0.5%	1/10W	
R121	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R131	1-216-846-11	METAL CHIP	120K	5%	1/16W	
R161	1-216-846-11	METAL CHIP	120K	5%	1/16W	
R201	1-216-813-11	METAL CHIP	220	5%	1/16W	
R202	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R203	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R204	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R205	1-216-817-11	METAL CHIP	470	5%	1/16W	
R206	1-216-818-11	METAL CHIP	560	5%	1/16W	
R207	1-216-817-11	METAL CHIP	470	5%	1/16W	
R208	1-216-813-11	METAL CHIP	220	5%	1/16W	
R209	1-216-816-11	METAL CHIP	390	5%	1/16W	
R210	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R211	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R212	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R213	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R214	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R215	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R216	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R217	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R218	1-216-807-11	METAL CHIP	68	5%	1/16W	
R219	1-216-807-11	METAL CHIP	68	5%	1/16W	
R220	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R221	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R222	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	
R223	1-216-817-11	METAL CHIP	470	5%	1/16W	
R224	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	
R225	1-216-815-11	METAL CHIP	330	5%	1/16W	
R226	1-216-807-11	METAL CHIP	68	5%	1/16W	
R227	1-216-820-11	METAL CHIP	820	5%	1/16W	
R228	1-216-836-11	METAL CHIP	18K	5%	1/16W	
R229	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R230	1-216-791-11	METAL CHIP	3.3	5%	1/16W	
R231	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R232	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R233	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R234	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R235	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R236	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R237	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	
R238	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R239	1-216-817-11	METAL CHIP	470	5%	1/16W	
R240	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R241	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R242	1-216-824-11	METAL CHIP	1.8K	5%	1/16W	
R243	1-216-812-11	METAL CHIP	180	5%	1/16W	
R245	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R246	1-216-819-11	METAL CHIP	680	5%	1/16W	
R247	1-216-817-11	METAL CHIP	470	5%	1/16W	
R248	1-216-812-11	METAL CHIP	180	5%	1/16W	
R249	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R250	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R251	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R252	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R253	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R254	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R255	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R256	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R257	1-216-817-11	METAL CHIP	470	5%	1/16W	
R258	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R261	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R262	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R263	1-216-817-11	METAL CHIP	470	5%	1/16W	
R264	1-216-817-11	METAL CHIP	470	5%	1/16W	
R265	1-216-817-11	METAL CHIP	470	5%	1/16W	
R281	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R282	1-216-819-11	METAL CHIP	680	5%	1/16W	
R283	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R284	1-216-864-11	METAL CHIP	0			
R285	1-216-815-11	METAL CHIP	330	5%	1/16W	
R286	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R287	1-216-865-11	METAL CHIP	3K	5%	1/16W	
R507	1-216-834-11	METAL CHIP	12K	5%	1/16W	

Ref. No.	Part No.	Description				Remark
R508	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R509	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W	
R510	1-216-647-11	METAL CHIP	680	0.5%	1/10W	
R511	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W	
R512	1-216-854-11	METAL CHIP	560K	5%	1/16W	
R513	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R514	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R515	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R516	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R517	1-216-854-11	METAL CHIP	560K	5%	1/16W	
R518	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	
R519	1-216-647-11	METAL CHIP	680	0.5%	1/10W	
R520	1-216-647-11	METAL CHIP	680	0.5%	1/10W	
R521	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W	
R522	1-216-649-11	METAL CHIP	820	0.5%	1/10W	
R523	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W	
R524	1-216-854-11	METAL CHIP	560K	5%	1/16W	
R525	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R526	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R527	1-216-854-11	METAL CHIP	560K	5%	1/16W	
R528	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	
R529	1-216-645-11	METAL CHIP	560	0.5%	1/10W	
R530	1-216-649-11	METAL CHIP	820	0.5%	1/10W	
R531	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	
R532	1-216-645-11	METAL CHIP	560	0.5%	1/10W	
R533	1-216-649-11	METAL CHIP	820	0.5%	1/10W	
R534	1-216-854-11	METAL CHIP	560K	5%	1/16W	
R535	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R536	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R537	1-216-854-11	METAL CHIP	560K	5%	1/16W	
R538	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W	
R539	1-216-665-11	METAL CHIP	560	0.5%	1/10W	
R540	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W	
R541	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R543	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R544	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R545	1-216-837-11	METAL CHIP	22K	5%	1/16W	
R546	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R547	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R548	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R549	1-216-864-11	METAL CHIP	0			
R551	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R552	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R553	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R561	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R571	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R573	1-216-817-11	METAL CHIP	470	5%	1/16W	
R574	1-216-821-11	METAL CHIP	1K	5%	1/16W	

Ref. No.	Part No.	Description				Remark
R575	1-216-813-11	METAL CHIP	220	5%	1/16W	
R576	1-216-828-11	METAL CHIP	3.9K	5%	1/16W	
R577	1-216-823-11	METAL CHIP	1.5K	5%	1/16W	
R578	1-216-815-11	METAL CHIP	330	5%	1/16W	
R579	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R580	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R581	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R582	1-216-842-11	METAL CHIP	56K	5%	1/16W	
R583	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R584	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R585	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R586	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R587	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R588	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R589	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R590	1-216-842-11	METAL CHIP	56K	5%	1/16W	
R591	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R592	1-216-856-11	METAL CHIP	820K	5%	1/16W	
R593	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R594	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R595	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R596	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R597	1-216-826-11	METAL CHIP	2.7K	5%	1/16W	
R598	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R599	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R607	1-216-832-11	METAL CHIP	8.2K	5%	1/16W	
R608	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R609	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R612	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R613	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R614	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R615	1-216-823-11	METAL CHIP	1.5K	5%	1/16W	
R616	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R661	1-216-864-11	METAL CHIP	0			
R668	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R705	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R706	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R707	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R708	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
R710	1-216-834-11	METAL CHIP	12K	5%	1/16W	
R711	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R714	1-216-864-11	METAL CHIP	0			
R715	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R716	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R717	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
R718	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R719	1-216-832-11	METAL CHIP	8.2K	5%	1/16W	
R720	1-216-822-11	METAL CHIP	1.2K	5%	1/16W	
R721	1-216-833-11	METAL CHIP	10K	5%	1/16W	

Ref. No.	Part No.	Description	Remark
R722	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R723	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R724	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R725	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R726	1-216-864-11	METAL CHIP 0	
R728	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R729	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R730	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R731	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R732	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R733	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R734	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R735	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R736	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R737	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R738	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R739	1-216-820-11	METAL CHIP 820 5% 1/16W	
R740	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R741	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R742	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R743	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R745	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R746	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R747	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R748	1-216-134-00	METAL CHIP 2.2 5% 1/8W	
R749	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R750	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R751	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R752	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R754	1-216-836-11	METAL CHIP 18K 5% 1/16W	
R755	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R756	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R757	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R758	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R759	1-216-836-11	METAL CHIP 18K 5% 1/16W	
R760	1-216-864-11	METAL CHIP 0	
R761	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R762	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R763	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R764	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R765	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R766	1-216-812-11	METAL CHIP 180 5% 1/16W	
R767	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R768	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R769	1-216-864-11	METAL CHIP 0	
R770	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R772	1-216-834-11	METAL CHIP 12K 5% 1/16W	
R773	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R775	1-216-836-11	METAL CHIP 18K 5% 1/16W	

Ref. No.	Part No.	Description	Remark
R776	1-216-816-11	METAL CHIP 390 5% 1/16W	
R778	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R779	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R780	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R781	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R782	1-216-818-11	METAL CHIP 560 5% 1/16W	
R783	1-216-817-11	METAL CHIP 470 5% 1/16W	
R784	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R785	1-216-817-11	METAL CHIP 470 5% 1/16W	
R786	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R787	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R788	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R789	1-216-836-11	METAL CHIP 18K 5% 1/16W	
R790	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R791	1-216-817-11	METAL CHIP 470 5% 1/16W	
R792	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R793	1-216-817-11	METAL CHIP 470 5% 1/16W	
R794	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R796	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R797	1-216-864-11	METAL CHIP 0	
R798	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R799	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R801	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R802	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R803	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R804	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R805	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R807	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R808	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R809	1-216-857-11	METAL CHIP 1M 5% 1/16W	
R810	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R811	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R812	1-216-840-11	METAL CHIP 39K 5% 1/16W	
R813	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R815	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R816	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R817	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R818	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R819	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R820	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R821	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R822	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R823	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R824	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R825	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R826	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R827	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R828	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R831	1-216-864-11	METAL CHIP 0	

Ref. No.	Part No.	Description			Remark
R833	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R834	1-216-837-11	METAL CHIP	22K	5%	1/16W
R835	1-216-837-11	METAL CHIP	22K	5%	1/16W
R836	1-216-837-11	METAL CHIP	22K	5%	1/16W
R837	1-216-833-11	METAL CHIP	10K	5%	1/16W
R844	1-216-817-11	METAL CHIP	470	5%	1/16W
R845	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R851	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R852	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R853	1-216-833-11	METAL CHIP	10K	5%	1/16W
R854	1-216-840-11	METAL CHIP	39K	5%	1/16W
R855	1-216-864-11	METAL CHIP	0		
R856	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R857	1-216-835-11	METAL CHIP	15K	5%	1/16W
R859	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R861	1-216-833-11	METAL CHIP	10K	5%	1/16W
R862	1-216-821-11	METAL CHIP	1K	5%	1/16W
R863	1-216-821-11	METAL CHIP	1K	5%	1/16W
R864	1-216-843-11	METAL CHIP	68K	5%	1/16W
R865	1-216-837-11	METAL CHIP	22K	5%	1/16W
R866	1-216-857-11	METAL CHIP	1M	5%	1/16W
R867	1-216-847-11	METAL CHIP	150K	5%	1/16W
R868	1-216-835-11	METAL CHIP	15K	5%	1/16W
R869	1-216-144-00	METAL CHIP	5.6	5%	1/8W
R872	1-216-857-11	METAL CHIP	1M	5%	1/16W
R873	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R874	1-216-837-11	METAL CHIP	22K	5%	1/16W
R876	1-216-837-11	METAL CHIP	22K	5%	1/16W
R877	1-216-841-11	METAL CHIP	47K	5%	1/16W
R878	1-216-839-11	METAL CHIP	33K	5%	1/16W
R881	1-216-837-11	METAL CHIP	22K	5%	1/16W
R882	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R883	1-216-840-11	METAL CHIP	39K	5%	1/16W
R884	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R885	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R886	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R887	1-216-833-11	METAL CHIP	10K	5%	1/16W
R888	1-216-833-11	METAL CHIP	10K	5%	1/16W
R889	1-216-837-11	METAL CHIP	22K	5%	1/16W
R890	1-216-840-11	METAL CHIP	39K	5%	1/16W
R891	1-216-815-11	METAL CHIP	330	5%	1/16W
R901	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R902	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R904	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R905	1-216-144-00	METAL CHIP	5.6	5%	1/8W
R906	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R907	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R909	1-216-833-11	METAL CHIP	10K	5%	1/16W
R910	1-216-833-11	METAL CHIP	10K	5%	1/16W
R912	1-216-864-11	METAL CHIP	0		
R913	1-216-833-11	METAL CHIP	10K	5%	1/16W
R914	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R916	1-216-843-11	METAL CHIP	68K	5%	1/16W
R919	1-216-833-11	METAL CHIP	10K	5%	1/16W
R920	1-216-857-11	METAL CHIP	1M	5%	1/16W
R921	1-216-849-11	METAL CHIP	220K	5%	1/16W
R922	1-216-847-11	METAL CHIP	150K	5%	1/16W
R923	1-216-854-11	METAL CHIP	560K	5%	1/16W
R924	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R926	1-216-857-11	METAL CHIP	1M	5%	1/16W
R931	1-216-835-11	METAL CHIP	15K	5%	1/16W
R932	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R933	1-216-845-11	METAL CHIP	100K	5%	1/16W
R934	1-216-845-11	METAL CHIP	100K	5%	1/16W
R935	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R936	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R937	1-216-837-11	METAL CHIP	22K	5%	1/16W
R940	1-216-837-11	METAL CHIP	22K	5%	1/16W
R941	1-216-833-11	METAL CHIP	10K	5%	1/16W
R942	1-216-844-11	METAL CHIP	82K	5%	1/16W
R943	1-216-819-11	METAL CHIP	680	5%	1/16W
R944	1-216-864-11	METAL CHIP	0		
R945	1-216-818-11	METAL CHIP	560	5%	1/16W
R946	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R947	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R949	1-216-821-11	METAL CHIP	1K	5%	1/16W
R950	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R952	1-216-845-11	METAL CHIP	100K	5%	1/16W
R953	1-216-837-11	METAL CHIP	22K	5%	1/16W
R954	1-216-820-11	METAL CHIP	820	5%	1/16W
R955	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R956	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R957	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R958	1-216-818-11	METAL CHIP	560	5%	1/16W
R959	1-216-833-11	METAL CHIP	10K	5%	1/16W
R960	1-216-821-11	METAL CHIP	1K	5%	1/16W
R961	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R962	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R963	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R964	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R965	1-216-821-11	METAL CHIP	1K	5%	1/16W
R966	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R967	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R968	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R969	1-216-833-11	METAL CHIP	10K	5%	1/16W
R970	1-216-833-11	METAL CHIP	10K	5%	1/16W
R971	1-216-839-11	METAL CHIP	33K	5%	1/16W

VC-85 POWER BLOCK

Ref. No.	Part No.	Description			Remark
R972	1-216-813-11	METAL CHIP	220	5%	1/16W
R973	1-216-813-11	METAL CHIP	220	5%	1/16W
R974	1-216-813-11	METAL CHIP	220	5%	1/16W
R981	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R982	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R987	1-216-833-11	METAL CHIP	10K	5%	1/16W
R988	1-216-837-11	METAL CHIP	22K	5%	1/16W
R989	1-216-837-11	METAL CHIP	22K	5%	1/16W
R993	1-216-833-11	METAL CHIP	10K	5%	1/16W
R994	1-216-833-11	METAL CHIP	10K	5%	1/16W
R995	1-216-833-11	METAL CHIP	10K	5%	1/16W
R996	1-216-837-11	METAL CHIP	22K	5%	1/16W
R997	1-218-295-11	METAL GLAZE	43K	5%	1/16W
R998	1-216-837-11	METAL CHIP	22K	5%	1/16W
R999	1-216-837-11	METAL CHIP	22K	5%	1/16W

< VARIABLE RESISTOR >

RV101	1-238-093-11	RES, ADJ CERMET100K
RV102	1-237-776-11	RES, VAR, CARBON 10K (COLOR)
RV104	1-230-661-11	RES, VAR, CARBON 10K (CLOSE OPEN)
RV509	1-238-092-11	RES, ADJ CERMET47K
RV510	1-238-092-11	RES, ADJ CERMET47K
RV511	1-238-092-11	RES, ADJ CERMET47K
RV512	1-238-092-11	RES, ADJ CERMET47K
RV851	1-238-093-11	RES, ADJ CERMET100K

< SWITCH >

S102	1-571-787-11	SWITCH, TACTILE (IRIS MANUAL)
S103	1-571-787-11	SWITCH, TACTILE (WHT BAL HOLD)
S114	1-570-865-11	SWITCH, SLIDE (NEGA/POSI)

< CRYSTAL >

X101	1-527-997-21	VIBRATOR, CRYSTAL (32.768KHz)
X801	1-577-118-11	VIBRATOR, LITHIUM NIOBATE (4MHz)

****

⚠ 1-413-623-12 POWER BLOCK BOARD
****
(Ref.No 9,000 Series)

< CAPACITOR >

C001	⚠ 9-998-433-01	FILM	0.1uF	250V
C002	⚠ 9-998-435-01	CERAMIC	2200PF	125V
C003	⚠ 9-998-435-01	CERAMIC	2200PF	125V
C004	- - -			
C005	⚠ 9-998-433-01	FILM	0.1uF	250V
C006	9-998-437-01	ELECT	180uF	250V
C007	9-998-434-01	FILM	0.1uF	400V
C009	9-998-431-01	FILM	0.047uF	100V

Ref. No.	Part No.	Description		Remark
C010	⚠ 1-161-953-12	CERAMIC	4700PF	125V
C011	⚠ 1-161-953-12	CERAMIC	4700PF	125V
C101	9-998-438-01	ELECT	680uF	16V
C102	9-998-439-01	ELECT	0.47uF	50V
C103	9-998-436-01	CERAMIC	100PF	50V
C104	9-998-440-01	ELECT	330uF	16V
C105	- - -			
C201	9-998-441-01	ELECT	1800uF	10V
C202	9-998-442-01	ELECT	4.7uF	35V
C203	9-998-436-01	CERAMIC	100PF	50V
C204	1-106-206-12	FILM	0.01uF	100V
C205	9-998-443-01	ELECT	1000uF	10V

< CONNECTOR >

CN001	⚠ 9-998-481-01	PIN, CONNECTOR (PC BOARD)	2P (250V, 7A)
CN002	9-998-482-01	PIN, CONNECTOR (PC BOARD)	4P (125V, 1A)
CN003	9-998-483-01	PIN, CONNECTOR (PC BOARD)	3P (125V, 1A)
CN01	9-998-484-01	PIN, CONNECTOR (PC BOARD)	
CN02	9-998-484-01	PIN, CONNECTOR (PC BOARD)	

< DIODE >

D001	⚠ 8-719-510-06	DIODE	S1WB60
D002	9-998-444-01	DIODE	1SS178
D101	8-719-948-59	DIODE	ERB93-02
D102	9-998-446-01	DIODE	RD15ESAB
D201	8-719-510-37	DIODE	D5LC20U
D202	9-998-444-01	DIODE	1SS178
D203	9-998-444-01	DIODE	1SS178
D204	9-998-444-01	DIODE	1SS178
D205	9-998-448-01	DIODE	RD6.8ESAB
D206	8-719-115-07	DIODE	RD15EB

< FUSE >

F001	⚠ 9-998-459-01	FUSE 125V 2.5A

< IC >

IC001	⚠ 9-998-449-01	IC	MA1030
IC101	9-998-450-01	IC	NJM431L
IC201	8-759-135-80	IC	uPC358C

< COIL >

L001	⚠ 9-998-456-01	FILTER, LINE 5mH 0.5A
L003	- - -	
L101	9-998-457-01	CORE, DRUM

< PHTO COUPLER >

PC001	⚠ 9-998-451-01	PHTO COUPLER PC817

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

< TRANSISTOR >

Ref. No.	Part No.	Description		Remark
Q201	⚠ 9-998-454-01	TRANSISTOR	2SA1307	
Q202	9-998-455-01	TRANSISTOR	2SC1815	
Q203	9-998-455-01	TRANSISTOR	2SC1815	

< RESISTOR >

Ref. No.	Part No.	Description		Remark
R001	⚠ 9-998-460-01	CEMENT	2.2	2W
R002	9-998-461-01	METAL OXIDE	56K	2W
R004	9-998-463-01	CARBON	47	1/6W
R005	9-998-464-01	CARBON	100	1/6W
R006	9-998-464-01	CARBON	100	1/6W
R101	9-998-465-01	CARBON	330	1/6W
R102	9-998-465-01	CARBON	330	1/6W
R103	9-998-466-01	CARBON	10K	1/6W
R104	9-998-466-01	CARBON	10K	1/6W
R105	9-998-467-01	CARBON	2.2K	1/6W
R106	9-998-463-01	CARBON	47K	1/6W
R107	9-998-468-01	CARBON	1K	1/6W
R201	9-998-468-01	CARBON	1K	1/6W
R202	9-998-471-01	CARBON	22K	1/6W
R203	9-998-468-01	CARBON	1K	1/6W
R204	9-998-472-01	CARBON	4.7K	1/6W
R205	9-998-473-01	METAL	15K	1/6W
R206	9-998-468-01	CARBON	1K	1/6W
R207	9-998-472-01	CARBON	4.7K	1/6W
R208	9-998-474-01	CARBON	100K	1/6W
R209	9-998-475-01	CARBON	220	1/6W
R210	9-998-476-01	CEMENT	0.1	2W
R211	9-998-477-01	CARBON	6.8K	1/6W
R212	9-998-475-01	CARBON	220	1/6W
R213	9-998-478-01	CARBON	390	1/6W
R214	9-998-468-01	CARBON	1K	1/6W
R215	9-998-471-01	CARBON	22K	1/2W
R216	- - -			

< THYRISTOR >

Ref. No.	Part No.	Description
SR101	⚠ 9-998-452-01	THYRISTOR SF3GZ47 (400V, 3A)

< TRANSFORMER >

Ref. No.	Part No.	Description
T001	⚠ 9-998-458-01	TRANSFORMER, CONVERTER

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description
VR101	9-998-480-01	RES, ADJ 1K
VR201	9-998-462-01	RES, ADJ 1K

****

MISCELLANEOUS

****

Ref. No.	Part No.	Description	Remark
53	1-518-679-11	FLUORESCENT TUBE	
56	⚠ 1-466-504-11	INVERTER, DC-AC	
63	1-466-230-21	CONVERTER UNIT, D/D	
64	⚠ 1-551-478-00	CORD, POWER	
110	1-547-381-12	FILTER BLOCK, OPTICAL	
116	1-547-480-11	LENS, ZOOM	
106	1-638-486-11	FP-378 FLEXIBLE BOARD	
105	1-638-487-11	FP-142 FLEXIBLE BOARD	
IC601	8-752-604-56	IC ICX038AN-1 (CCD IMAGER)	
S901	⚠ 1-572-810-11	SWITCH, SEESAW (AC POWER)	

****

ACCESSORY & PACKING MATERIAL

****

Ref. No.	Part No.	Description	Remark
	X-3940-412-1	CARRIER (N) ASSY, FILM	
	1-574-039-11	CORD, CONNECTION	
	* 3-795-581-21	SAFEGUARD (SONY), IMPORTANT	(US, Canadian)
	* 3-941-787-01	CUSHION (UPPER)	
	* 3-941-788-01	CUSHION (LOWER)	
	* 3-941-789-11	INDIVIDUAL CARTON	
	3-941-887-01	CARRIER (POSI), FILM	
	3-942-328-01	COVER, DUST	
	3-752-973-21	MANUAL, INSTRUCTION (ENGLISH)	
	3-752-973-31	MANUAL, INSTRUCTION (FRENCH)	(US, Canadian)

****

HARDWARE LIST

****

Ref. No.	Part No.	Description	Remark
# 1	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
# 2	7-621-773-95	SCREW +B 2.6X6	
# 3	7-621-770-87	SCREW +P 2.6X5	
# 4	7-621-555-10	SCREW +K 2X3	
# 5	7-621-255-15	SCREW +P 2X3	
# 6	7-685-645-79	SCREW +BTP 3X6 TYPE2 N-S	
# 7	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
# 8	7-621-281-15	SCREW +P 2X2	
# 9	7-621-255-75	SCREW +P 2X12 TYPE2 NON-SLIT	
#10	7-621-555-30	SCREW +K 2X5	
#11	7-621-772-50	SCREW +B 2X10	
#12	7-685-133-19	SCREW +P 2.6X6 TYPE2 SLIT	
#13	7-621-255-55	SCREW +P 2X8	

****

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

SECTION 7
ELECTRICAL ADJUSTMENT

When performing adjustment, refer to the parts arrangement diagram from page 158.

7-1. PREPARATIONS FOR ADJUSTMENT

7-1-1. Servicing tools

- Oscilloscope
- Adjusting screw driver
- Regulated power supply (2 units)
- Color monitor
- Vectorscope
- Digital voltmeter

Ref.	No.	Part Name	Part No.
J-1	ND filter 0.3	J-6080-818-A	Focus adjustment (2 pcs)
	ND filter 1.0	J-6080-808-A	Focus adjustment (2 pcs) Auto focus confirmation
	ND filter 0.4	J-6080-806-A	Positive iris adjustment
	ND filter 0.1	J-6080-807-A	Positive iris adjustment Auto focus confirmation (2 pcs)
J-2	Color bar chart	J-6082-126-A	
	Negative color bar chart	J-6082-127-A	
J-3	Siemens star chart	J-6082-130-A	Focus adjustment, auto focus adjustment
J-4	AF microprocessor data reading tool	J-6082-025-A	
J-5	Adjustment remote controller (RM-95 partly improved)	J-6082-053-A	
J-6	White balance chart (gray)	J-6082-129-A	
	Negative white balance chart (orange)	J-6082-128-A	
J-7	Inmega cycle chart	J-6082-125-A	

*1 PTB-500 (J-6029-140-A) is also available.

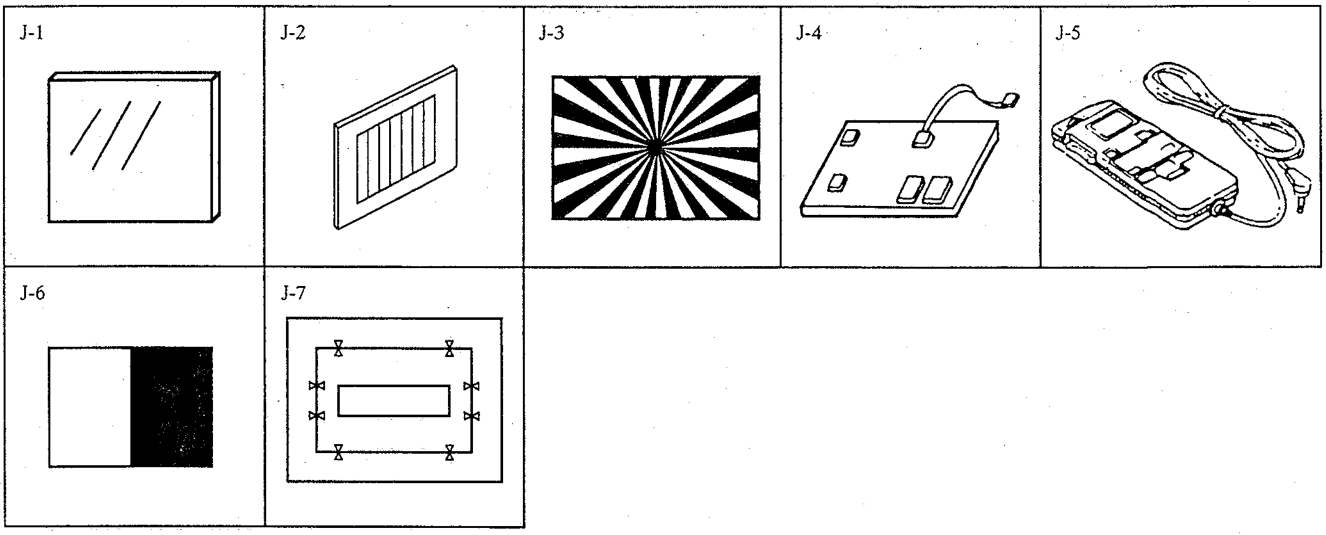


Fig. 7-1.

7-1-2. Preparation

Note: Refer to "2. REMOVAL" for the details of the removal of the cabinet or various boards.

1) Connect the adjusting equipments as shown in Fig. 4-2.

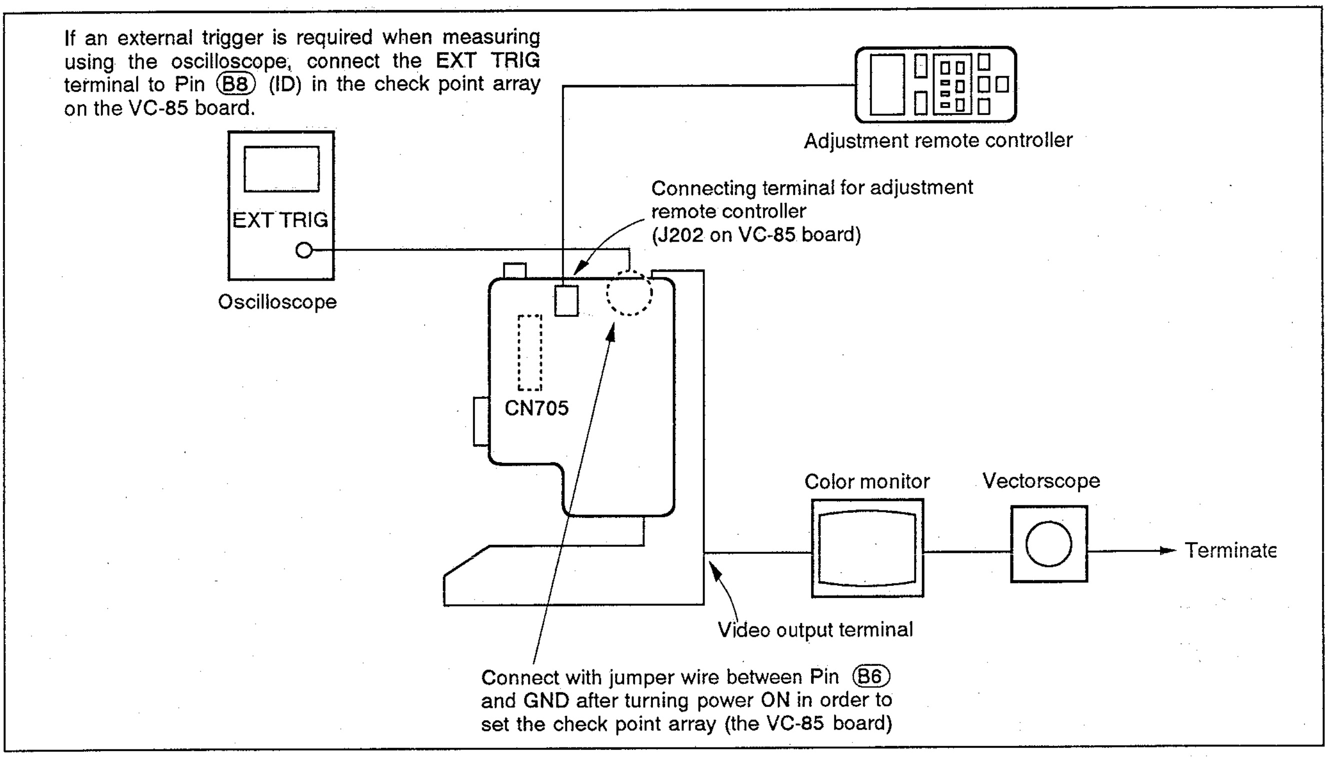

If an external trigger is required when measuring using the oscilloscope, connect the EXT TRIG terminal to Pin (B8) (ID) in the check point array on the VC-85 board.
EXT TRIG
Oscilloscope
Adjustment remote controller
Connecting terminal for adjustment remote controller (J202 on VC-85 board)
CN705
Color monitor
Vectorscope
Terminate
Video output terminal
Connect with jumper wire between Pin (B6) and GND after turning power ON in order to set the check point array (the VC-85 board)

Fig. 7-2.

7-1-3. Precautions

1. Setting of switches

Performing adjustment by setting the switches in the following positions unless otherwise specified.

1. Perform adjustment by setting the adjustment data of the adjustment address 75 (AWB MODE) to 00 unless otherwise specified. Be sure to return the data to F0 after adjustment.
2. "Iris" control (RV104 on the VC-85 board) ··· center position
3. "Tint" control (RV102 on the VC-85 board) ·············· center click position
4. "Negative/positive" selection (S114 on the VC-85 board) ·············· positive
5. "Iris (auto/manual selection)" button (S102 on the VC-85 board) ·············· "auto" (LED off)
6. "White balance hold (auto/manual selection)" button (S103 on the VC-85 board) ·············· "auto" (LED off)
7. "Color balance (ON/OFF selection)" button (S115 on the FA-1 board) ·············· "OFF" (LED off)

2. Adjustment order

As a rule, perform adjustments according to the described order.

3. Subject

1) Color bar chart (standard picture frame)
   When performing adjustment using the color bar chart, adjust the picture frame as in the Fig. 7-3. (standard picture frame)
2) White pattern (standard picture frame)
   Remove the color bar chart and adjust with the zoom button so that the white pattern has the same size and position as the color bar chart (standard picture frame).
3) Siemens star chart
   Adjust the chart position so that the centers of the siemens star and monitor screen overlap each other on the monitor display.

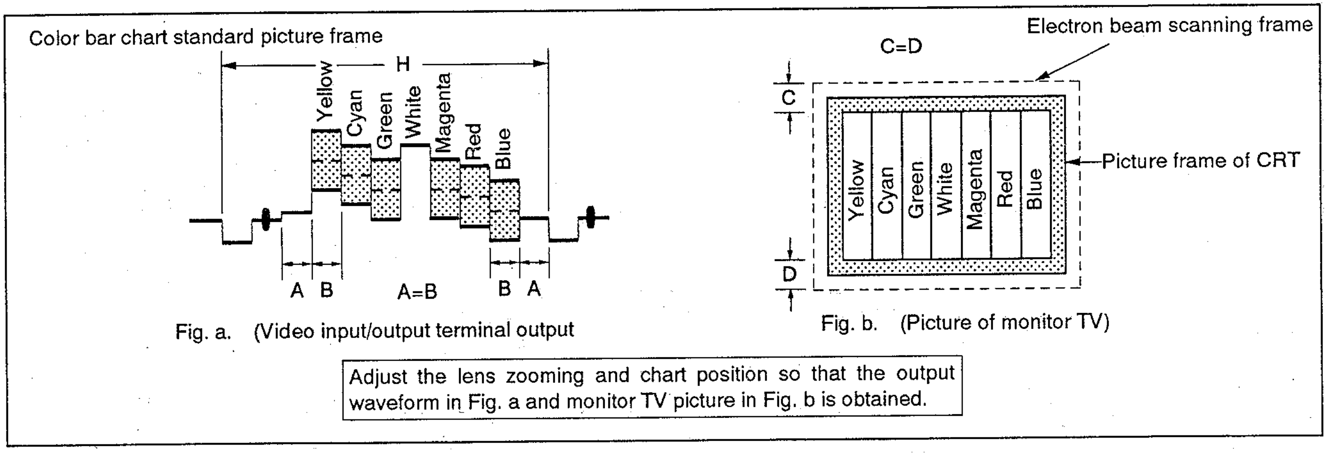

Color bar chart standard picture frame
H
Yellow
Cyan
Green
White
Magenta
Red
Blue
A B
A=B
B A
Electron beam scanning frame
C=D
C
D
Picture frame of CRT
Yellow
Cyan
Green
White
Magenta
Red
Blue

Fig. a. (Video input/output terminal output

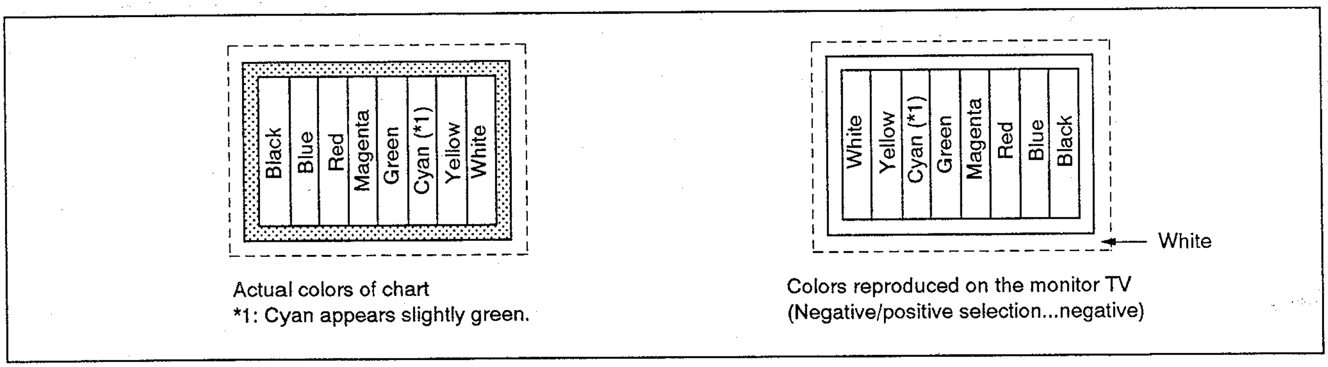
Fig. b. (Picture of monitor TV)

Adjust the lens zooming and chart position so that the output waveform in Fig. a and monitor TV picture in Fig. b is obtained.

Fig. 7-3.

4) Negative color bar chart (standard picture frame)
   Adjust the picture frame in the same manner as (positive) color bar chart.

Actual colors displayed on the negative color bar chart and colors displayed on the monitor TV are shown in the figure below.


Black
Blue
Red
Magenta
Green
Cyan (*1)
Yellow
White
White
Yellow
Cyan (*1)
Green
Magenta
Red
Blue
Black
White

Actual colors of chart
*1: Cyan appears slightly green.

Colors reproduced on the monitor TV
(Negative/positive selection...negative)

Fig. 7-4.

5) White balance chart (gray) and negative white balance chart (orange) (Standard picture frame)
Move the picture frame to the TELE side until it stops. Set the border line between white/gray and white/orange to the center.

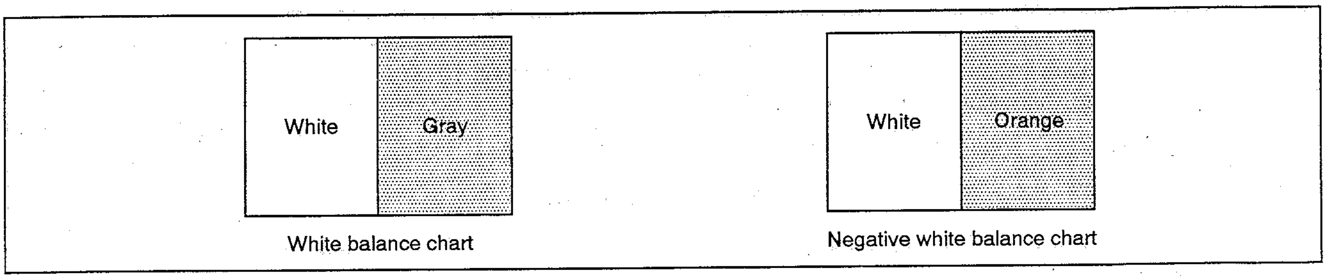

White
Gray
White balance chart
White
Orange
Negative white balance chart

Fig. 7-5.

6) Inmega cycle chart
Set the monitor TV in to under scan condition and adjust the picture frame as in the figure below.

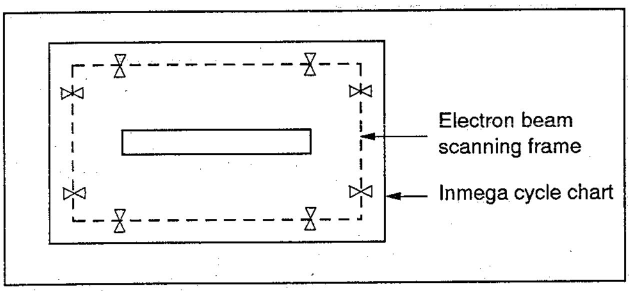

Electron beam scanning frame
Inmega cycle chart

Fig. 7-6.

7-1-4. Adjustment remote controller

The camera block employs EVR (electronic volume) as an adjustment element in place of conventional semi-fixed resistor. The EVR is controlled by EVR/AWB microprocessor (IC802 on VC-85 board). This microprocessor reads out the data written in the non-volatile memory within the microprocessor and sends it to EVR. The EVR makes the data (8-bit per each adjustment point) D/A conversion to generate the adjusting voltage.
It is necessary to change the adjustment data written in the non-volatile memory to adjust the camera block. For this purpose, adjustment remote controller is used.
The adjustment remote controller performs bi-directional communication with the camera block microprocessor using the remote controller signal line (LANC). The adjustment address and adjustment data up/down command are sent from the adjustment remote controller to the camera block microprocessor. The adjustment address and adjustment data are sent from the camera block microprocessor to the adjustment remote controller.

1. Use of adjustment remote controller

Solder the lead wires, etc. to the Pin (B6) of the check point array on the VC-85 board. (Refer to 7-1-5.)

1) Connect the adjustment remote controller to the remote terminal (J202 on VC-85 board). (Set the HOLD switch of the adjustment remote controller to the HOLD position:service position.)
2) Turn ON the power of the main unit.
3) Connect with the jumper wire between the Pin (B6) ($\overline{\text{CAM ADJ}}$) of the check point array and GND.
   (This connection stops ordinary remote control operation for EVR/AWB microprocessor and starts exclusive adjustment communication.)
   Note: Be sure to make this connection after turning the power ON. If connection is correct, the display below is shown on the LCD of the adjustment remote controller. (Adjustment data depends on unit.)

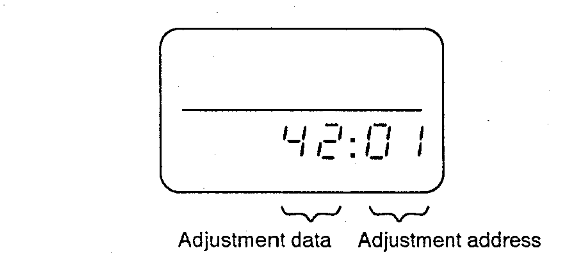


Fig. 7-7.

4) Designate the desired adjustment address using the adjustment remote controller.
   Adjustment address is increased by pressing FF (►►) button.
   Adjustment address is decreased by pressing REW (◄◄) button.
   The adjustment address is shown in hexadecimal. There are 117 addresses from 01 to 75. The adjustment addresses correspond to EVR output terminals (IC703, IC706 and IC902 on VC-85 board). Refer to the table 7-3 for the adjustment contents of each address.
5) Perform adjustment by increasing or decreasing the adjustment data.
   Adjustment data is increased by pressing PLAY (►) button.
   Adjustment data is decreased by pressing STOP (■) button.
   - The adjustment address is shown in hexadecimal. There are 256 values from 00 to FF.

Hexadecimal	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Display on LCD	0	1	2	3	4	5	6	7	8	9	A	b	c	d	E	F
Decimal equivalent	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Table 7-1.

   - The adjustment data corresponds to the output voltage of EVR (IC703,IC706 and IC902 on the VC-85 board) and shown below.

Adjustment data ( ) shows decimal equivalent	EVR output voltage
FF (=255)	Maximum value (approx. 5 Vdc)
F0 (=240)	↑
E0 (=224)	
D0 (=208)	
C0 (=192)	
B0 (=176)	
A0 (=160)	
90 (=144)	
80 (=128)	Center value (approx. 2.5 Vdc)
70 (=112)	
60 (=96)	
50 (=80)	
40 (=64)	
30 (=48)	
20 (=32)	
10 (=16)	↓
00 (=0)	Minimum value (approx. 0 Vdc)

Table 7-2.

6) To store the adjustment data in the non-volatile memory within EVR/AWB microprocessor (IC802 on VC-85 board), change the adjustment address by FF (►►) button or REW (◄◄) button.
   (If this procedure is not performed, a new adjustment data is not stored in the non-volatile memory.)

2. Precautions on use of adjustment remote controller

The correct adjustment data may be erased by mis-operation of the adjustment remote controller. To prevent this, it is recommended to record all the adjustment data and to record a new adjustment data after each step is completed.

Note: Data already described in the recording for adjustment data memo column is fixed data.

Adjustment address	Adjusting voltage output terminal	Adjustment item	Remarks	Adjustment data memo column
01	Pin ⑱ of IC703	DELTA R	White balance adjustment	
02	Pin ⑲ of IC703	DELTA B		
03				00
04	Pin ③ of IC703	C2 GAIN	Chroma signal matrix adjustment (2)	
05	Pin ④ of IC703	NEGA R-Y GAIN	Negative color reproduction adjustment	
06	Pin ⑤ of IC703	NEGA B-Y GAIN		
07	Pin ⑥ of IC703	NEGA R-Y HUE		
08	Pin ⑦ of IC703	NEGA B-Y HUE		
09	Pin ⑧ of IC703	NEGA C γ		D0
0A	Pin ⑨ of IC703	C LEVEL	Chroma level adjustment	
0B	Pin ⑫ of IC703	NEGA R GAIN	Negative pre-white balance adjustment	
0C	Pin ⑬ of IC703	NEGA B GAIN		
0D	Pin ⑱ of IC706	NEGA PED		
0E	Pin ⑲ of IC706	C1 GAIN	Chroma signal matrix adjustment (1)	
0F	Pin ② of IC706	Y1 GAIN	Y signal matrix adjustment	
10	Pin ③ of IC706	WC	White clip adjustment	
11	Pin ④ of IC706	SET UP		
12	Pin ⑤ of IC706	SYNC LEVEL		
13	Pin ⑥ of IC706	YH LEVEL		
14	Pin ⑦ of IC706	APERTURE		
15	Pin ⑧ of IC706	POSI Y LEVEL		
16	Pin ⑨ of IC706	BURST LEVEL		
17	Pin ⑫ of IC706	HUE CONT (PAL)	Not used	00
18	Pin ⑬ of IC706	NEGA Y LEVEL		
19	Pin ⑱ of IC902	POSI IRIS		
1A	Pin ⑲ of IC902	POSI R GAIN	Positive pre-white balance adjustment	
1B	Pin ② of IC902	HALL OFFSET	Hall adjustment	
1C	Pin ③ of IC902	POSI B GAIN	Positive pre-white balance adjustment	
1D	Pin ④ of IC902	PG CONT		
1E	Pin ⑤ of IC902	V SUB		
1F	Pin ⑥ of IC902	NEGA IRIS		
20	Pin ⑦ of IC902	AGC		FF
21	Pin ⑧ of IC902	NEGA Y- γ		50
22	Pin ⑨ of IC902			00
23	Pin ⑫ of IC902			00
24	Pin ⑬ of IC902	MGC		00

Table 7-3. (1)

<table>
<tr><th>Adjustment address</th><th>Adjusting voltage output terminal</th><th>Adjustment item</th><th colspan="2">Remarks</th><th>Adjustment data memo column</th></tr>
<tr><td>25</td><td></td><td>MODE</td><td colspan="2">The following adjustment modes are selected by changing the adjustment data.<table><tr><th>Adjustment data</th><th>Adjustment mode</th></tr><tr><td>00</td><td>Release</td></tr><tr><td>01</td><td>Focus hunching</td></tr><tr><td>03</td><td>Zoom position</td></tr><tr><td>05</td><td>Hall, iris close</td></tr><tr><td>07</td><td>Hall, iris open</td></tr><tr><td>09</td><td>Iris A/D converted value</td></tr><tr><td>0B</td><td>AGC A/D converted value</td></tr><tr><td>FD</td><td>Auto focus filter fixed at FA.</td></tr><tr><td>FF</td><td>Auto focus filter fixed at FH.</td></tr></table></td><td>00</td></tr>
<tr><td>26</td><td></td><td>LLA</td><td colspan="2">Low illuminance display threshold</td><td>3F</td></tr>
<tr><td>27</td><td></td><td>MACRO</td><td colspan="2">Macro position</td><td>00</td></tr>
<tr><td>28</td><td></td><td>IN/OUT DOOR</td><td colspan="2">Indoor/outdoor discrimination</td><td>00</td></tr>
<tr><td>29</td><td></td><td>STEP A</td><td colspan="2">Number of motor FG for peak searching</td><td>04</td></tr>
<tr><td>2A</td><td></td><td>BASE-H</td><td colspan="2">Low contrast start threshold</td><td>18</td></tr>
<tr><td>2B</td><td></td><td>STILL-THR1</td><td colspan="2">Still area threshold (1)</td><td>04</td></tr>
<tr><td>2C</td><td></td><td>SEARCH-THR</td><td colspan="2">Top check area threshold</td><td>10</td></tr>
<tr><td>2D</td><td></td><td>HALL OUT</td><td colspan="2" rowspan="2">AWB indoor/outdoor discrimination threshold</td><td>14</td></tr>
<tr><td>2E</td><td></td><td>HALL IN</td><td>18</td></tr>
<tr><td>2F</td><td></td><td>TC-COUNTER</td><td colspan="2"></td><td>01</td></tr>
<tr><td>30</td><td></td><td>FH-W</td><td>FH evaluation value at all white</td><td rowspan="4">Auto focus adjustment</td><td></td></tr>
<tr><td>31</td><td></td><td>FH-B</td><td>FH evaluation value at all black</td><td></td></tr>
<tr><td>32</td><td></td><td>AGC-W</td><td>AGC A/D converted value at all white</td><td></td></tr>
<tr><td>33</td><td></td><td>AGC-B</td><td>AGC A/D converted value at all black</td><td></td></tr>
<tr><td>34</td><td></td><td>BACKRUSH</td><td colspan="2">Backrush compensation amount</td><td>01</td></tr>
<tr><td>35</td><td></td><td>FG-SPEED</td><td colspan="2">Focus speed setting</td><td>02</td></tr>
<tr><td>36</td><td></td><td>STILL-THR2</td><td colspan="2">Still area threshold (2)</td><td>02</td></tr>
<tr><td>37</td><td></td><td>STILL-THR3</td><td colspan="2">Still area threshold (3)</td><td>01</td></tr>
<tr><td>38</td><td></td><td>LC-THR</td><td colspan="2">Threshold at low contrast</td><td>10</td></tr>
<tr><td>39</td><td></td><td>R32MSB</td><td colspan="2" rowspan="6">Preset data
(The data in the column are automatically input when adjusting auto white balance.)</td><td></td></tr>
<tr><td>3A</td><td></td><td>R32LSB</td><td></td></tr>
<tr><td>3B</td><td></td><td>B32MSB</td><td></td></tr>
<tr><td>3C</td><td></td><td>B32LSB</td><td></td></tr>
<tr><td>3D</td><td></td><td>G32MSB</td><td></td></tr>
<tr><td>3E</td><td></td><td>G32LSB</td><td></td></tr>
<tr><td>3F</td><td></td><td>START R</td><td rowspan="2">R CONT and B CONT data at auto white balance operation starting</td><td rowspan="6">Auto white balance fixed data</td><td>26</td></tr>
<tr><td>40</td><td></td><td>START B</td><td>51</td></tr>
<tr><td>41</td><td></td><td>TM DIVID</td><td>Border value of the tracking frame</td><td>44</td></tr>
<tr><td>42</td><td></td><td>BM DIVID</td><td>Border value of the tracking frame</td><td>28</td></tr>
<tr><td>43</td><td></td><td>TOP SLP R</td><td>R CONT coefficient of the upper step of the tracking frame</td><td>80</td></tr>
<tr><td>44</td><td></td><td>TOP SLP B</td><td>B CONT coefficient of the upper step of the tracking frame
Auto white</td><td>20</td></tr>
</table>

Table 7-3. (2)

Adjustment address	Adjusting voltage output terminal	Adjustment item	Remarks		Adjustment data memo column
45		MDL SLP R	R CONT and B CONT coefficient of the middle step of the tracking frame	Auto white balance fixed data	40
46		MDL SLP B			40
47		BTM SLP R			20
48		BTM SLP B			40
49		KIKO R			80
4A		KIKO B			30
4B		TOP UP	Upper and lower limit frames of the upper step of the tracking frame		85
4C		TOP DWN			67
4D		MDL UP	Upper and lower limit frames of the upper, middle and lower steps of the tracking frame		70
4E		MDL DWN			6B
4F		BTM UP			52
50		BTM DWN			3C
51		KEIKO DWN			7F
52		R DWN LMT	R CONT data upper and lower limit of the tracking frame		23
53		R UP LMT			64
54		B UP LMT	B CONT data upper limit of the tracking frame		7A 55
55		IN BTOP			46
56		IN BMAX	INDOOR operation frame upper limit of the tracking frame INDOOR mode		46
57		OUT BMIN	B CONT data upper limit		3A
58		OUT BTM	OUTDOOR mode B CONT data lower limit		1C
59		B DWN LMT	OUTDOOR mode operation frame lower limit frame of the tracking frame		25 55 20
5A		R OUTDOOR	B CONT data lower limit of the tracking frame		26
5B		B OUTDOOR			34
5C		Ra	White balance preset data R CONT and B CONT data of the points a, b and c on the curve of blackbody radiation		65
5D		Rb			51
5E		Rc			3D
5F		Ba			13
60		Bb			2D
61		Bc			3B
62		R/B TOP	Incline data of the curve of blackbody radiation		35
63		R/B MDL			16
64		R/B DWN			11
65		B/R TOP			90
66		B/R MDL			08
67		B/R DWN			
68		KEIKO	Indoor AWB data		
69		LL LMT	Minimum tracking illuminance		

Table 7-3. (3)

<table>
<tr><th>Adjustment address</th><th>Adjusting voltage output terminal</th><th>Adjustment item</th><th colspan="2">Remarks</th><th>Adjustment data memo column</th></tr>
<tr><td>6A</td><td></td><td>B HUE KEI</td><td rowspan="5">Variable linear matrix data</td><td rowspan="7">Auto white balance fixed data</td><td>18</td></tr>
<tr><td>6B</td><td></td><td>R GAIN OFF</td><td>30</td></tr>
<tr><td>6C</td><td></td><td>R GAIN KEI</td><td>20</td></tr>
<tr><td>6D</td><td></td><td>R HUE OFF</td><td>37</td></tr>
<tr><td>6E</td><td></td><td>R HUE KEI</td><td>1E</td></tr>
<tr><td>6F</td><td></td><td>DELAY TM</td><td>Tracking speed</td><td>10</td></tr>
<tr><td>70</td><td></td><td>FAST TM</td><td>Initial high speed tracking times</td><td>30</td></tr>
<tr><td>71</td><td></td><td>CAM DDS O</td><td colspan="2" rowspan="4">Fixed data</td><td>00</td></tr>
<tr><td>72</td><td></td><td>MODE</td><td>09</td></tr>
<tr><td>73</td><td></td><td>DSP MODE</td><td>00</td></tr>
<tr><td>74</td><td></td><td>CAM ALN</td><td>00</td></tr>
<tr><td>75</td><td></td><td>AWB MODE</td><td colspan="2">The following auto white balance adjustment modes are selected by changing the adjustment data.
<table>
<tr><th>Adjustment data</th><th>Adjustment mode</th></tr>
<tr><td>00</td><td>Setting at adjustment</td></tr>
<tr><td>10
E0</td><td>Auto white balance adjustment mode</td></tr>
<tr><td>F0</td><td>3200K preset data read mode</td></tr>
<tr><td></td><td>Auto white balance tracking zone discrimination invalid, all area discrimination mode and setting at shipping</td></tr>
</table></td><td>F0</td></tr>
</table>

Table 7-3. (4)

7-1-5. Check Point Array

Most of measurement points for camera block adjustment are placed on the check point array on the VC-85 board. Solder short lead wires to terminals necessary for adjusting and connect oscilloscope, etc. The terminal numbers and signal names are shown in the Table 7-4.

Terminal No.	Signal name	Terminal No.	Signal name
A1	G OUT	B1	$\overline{\text{WB ADJ}}$
A2	PG CONT	B2	N.C
A3	N.C	B3	Y(LPF)OUT
A4	Y0	B4	V SUB
A5	Y1	B5	AW ADJ
A6	C0	B6	$\overline{\text{CAM ADJ}}$
A7	C1	B7	MODE
A8	CAM Y	B8	ID
A9	YH	B9	N.C
A10	CAM C	B10	GND
A11	N.C	B11	CCD OUT

※ N.C...no connection

Table 7-4.

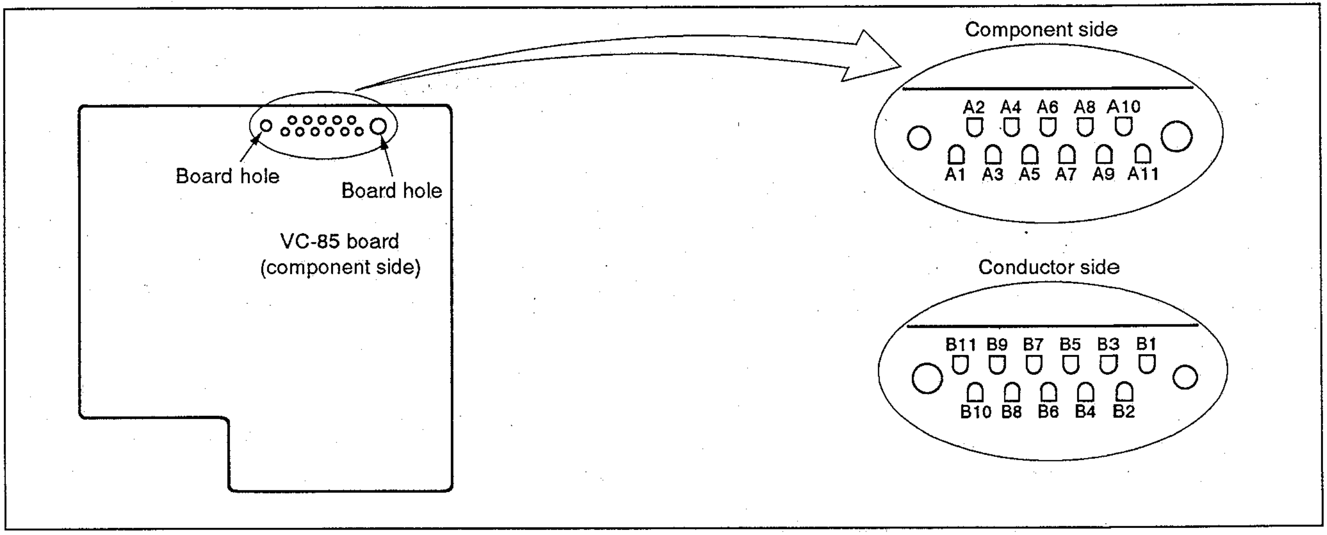

Component side
A2 A4 A6 A8 A10
A1 A3 A5 A7 A9 A11
Board hole
Board hole
VC-85 board
(component side)
Conductor side
B11 B9 B7 B5 B3 B1
B10 B8 B6 B4 B2

Fig. 7-8.

7-1-6. AF Microprocessor Data Reading Tool

The AF microprocessor data reading tool converts the serial data (output data varies according to hall (iris) state, focus state, focus motor speed, zoom ring position, etc.) for adjustment output from the AF microprocessor (IC905 on VC-85 board) into a 2-digit hexadecimal code and displays it on the LED.

Connection

Connect as follows.

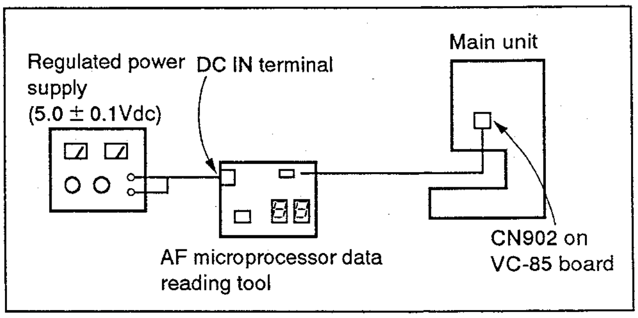

Regulated power supply
(5.0 ± 0.1Vdc)
DC IN terminal
Main unit
AF microprocessor data reading tool
CN902 on VC-85 board

Fig. 7-9.

7-1-7. Data Processing

Some adjustment items require calculation from the data (hexadecimal) indicated on the reading tool for AF microprocessor adjustment remote controller to obtain the adjustment data. In this case, convert hexadecimal values into decimal and perform calculation, then convert the result into hexadecimal to make adjustment data. Hexadecimal to decimal conversion table is shown in the table 7-5.

Hexadecimal to decimal conversion table

Hexadecimal lower digit / Hexadecimal upper digit	0	1	2	3	4	5	6	7	8	9	A (A)	B (b)	C (c)	② D (d)	E (E)	F (F)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (A)	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
① → B (b)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (c)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (d)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (E)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (F)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

Note: ( ) is the indication on the tool or adjustment remote controller

Example: Indication on the tool or adjustment remote controller is BD (b d).
Upper digit is B (b) and lower digit is D (d) in hexadecimal, so "189" in decimal value is obtained from the intersection of ① and ② in the above table.

Table 7-5.

7-2. FOCUS ADJUSTMENT

Subject	Siemens star
Filter	ND filter 1.0 (2 pcs) and 0.3 (2 pcs)
Measurement Point	Monitor TV
Measuring Equipment	
Adjustment Element	Front lens ring

Adjusting method:

1) Connect a jumper wire between TP151 on the FA-1 board and GND (frame).
2) Attach ND filter 2.6 (1.0+1.0+0.3+0.3) to the lens.
3) Press the zoom W button (S111 on FA-1 board) to set WIDE end.
4) Press the auto focus button (S101 on FA-1 board) and release it when focus is matched.
5) Press the zoom T button (S112 on FA-1 board) to set TELE end.
6) Rotate the front lens ring and adjust the focus.
7) Repeat steps 2) to 5), fix the front lens ring so that focus is matched on both WIDE end and TELE end. (Fix with adhesive tape.)
8) Disconnect a jumper wire between TP151 on FA-1 board and GND (frame).

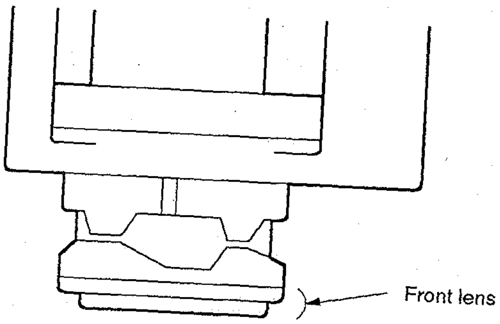


Fig. 7-10.

7-3. ELECTRICAL ADJUSTMENT

7-3-1. Power Supply Check

1. Power source block check (power source block)

Measuring Equipment	Digital voltmeter
6V Check	
Measurement Point	Pin ① of CN3 and Pin ① of CN203 on VC-85 board
Specified Value	6.0 ± 0.5 Vdc
12 V Check	
Measurement Point	Pin ① of CN2
Specified Value	12.0 ± 0.5 Vdc

Checking method:

1) Each power supply voltage should meet the specified value.

2. DC-DC converter check (VC-85 board)

Measuring Equipment	Digital voltmeter
CAM 5V Check	
Measurement Point	Pin ④ of CN701
Specified Value	4.9 ± 0.5 Vdc
5V Check	
Measurement Point	Pin ③ of CN702
Specified Value	4.9 ± 0.5 Vdc
15V Check	
Measurement Point	Pin ① of CN7022
Specified Value	15.0 ± 0.5 Vdc
-9V Check	
Measurement Point	Pin ② of CN702
Specified Value	-9.0 ± 0.5 Vdc

Checking method:

1) Each power voltage should meet the specified value.

7-3-2. DDS Microprocessor System Clock Adjustment (VC-85 Board)

Measurement Point	TP101 (Pin ⑱ of IC101)
Measuring Equipment	Frequency counter (Note)
Adjustment Element	RV101
Specified Value	330 ± 5 kHz

Note: Use a probe of low capacity (10 PF or less) and high resistance (1 MΩ).

Connection:

1) Connect with a jumper wire between TP102 (Pin ㉘ of IC101) and GND.

Adjusting method:

1) Adjust with RV101 for 330 ± 5 kHz.

7-3-3. DDS Microprocessor Clock Check (VC-85 board)

Measurement Point	TP103 (Pin ㊶ of IC101)
Measuring Equipment	Frequency counter
Specified Value	8.192 ± 0.001 kHz

Connection:

1) Connect with a jumper wire between TP102 (Pin ㉘ of IC101) and GND.

Checking method:

1) Oscillation frequency should meet the specified value.

7-3-4. EVR Initial Settings

Set the adjustment data of the adjustment address 75 to 00. With other adjustment addresses, set the adjustment data to the initial value only when EVR/AWB microprocessor (IC802 on VC-85 board) was replaced.

Be sure to return the adjustment data of the adjustment address 75 to F0 after adjustment is completed.

Adjusting method:

1) Set the adjustment data of each adjustment address to the initial value by the adjustment remote controller.
2) Change the adjustment address to store the last adjustment data in the memory.

Adjustment address	Adjustment data initial value	Adjustment address	Adjustment data initial value	Adjustment address	Adjustment data initial value
01 (DELTA R)	50	26 (LLA)	3F	51 (KEIKO DWN)	7F
02 (DELTA B)	50	27 (MACRO)	00	52 (R DWN LMT)	23
03	00	28 (IN/OUT DOOR)	00	53 (R TOP LMT)	64
04 (C2 GAIN)	C0	29 (STEP A)	04	54 (B UP LMT)	7A
05 (NEGA R-Y GAIN)	EC	2A (BASE-H)	18	55 (IN B TOP)	55
06 (NEGA B-Y GAIN)	DB	2B (STILL-THR1)	04	56 (IN B MAX)	46
07 (NEGA R-Y HUE)	C3	2C (SEARCH-THR)	10	57 (OUT B MAX)	46
08 (NEGA B-Y HUE)	CB	2D (HALL OUT)	14	58 (OUT B DWN)	3A
09 (NEGA C- γ)	D0	2E (HALL IN)	18	59 (B DWN LMT)	1C
0A (C LEVEL)	B6	2F (TC-COUNTER)	01	5A (R OUTDOOR)	25
0B (NEGA R GAIN)	83	30 (FH-W)	00	5B (B OUTDOOR)	55
0C (NEGA B GAIN)	7F	31 (FH-B)	00	5C (Ra)	20
0D (NEGA PED)	80	32 (AGC-W)	00	5D (Rb)	26
0E (C1 GAIN)	C0	33 (AGC-B)	00	5E (Rc)	34
0F (Y1 GAIN)	C0	34 (BACKRUSH)	01	5F (Ba)	65
10 (WC)	B0	35 (FG-SPEED)	02	60 (Bb)	51
11 (SET UP)	98	36 (STILL-THR2)	02	61 (Bc)	3D
12 (SYNC LEVEL)	90	37 (STILL-THR3)	01	62 (R/B TOP)	13
13 (YH LEVEL)	D4	38 (LC-THR)	10	63 (R/B MDL)	2D
14 (APERTURE)	9E	3F (START R)	26	64 (R/B DWN)	3B
15 (POSI Y LEVEL)	90	40 (START B)	51	65 (B/R TOP)	35
16 (BURST LEVEL)	82	41 (TM DIVID)	44	66 (B/R MDL)	16
17 (HUE CONT (PAL))	00	42 (BM DIVID)	28	67 (B/R DWN)	11
18 (NEGA Y LEVEL)	D0	43 (TOP SLP R)	80	68 (KEIKO)	90
19 (POSI IRIS)	78	44 (TOP SLP B)	20	69 (LL LMT)	08
1A (POSI R GAIN)	6D	45 (MDL SLP R)	40	6A (B HUE KEI)	18
1B (HALL OFFSET)	2E	46 (MDL SLP B)	40	6B (R GAIN OFF)	30
1C (POSI B GAIN)	7E	47 (BTM SLP R)	20	6C (R GAIN KEI)	20
1D (PG CONT)	A0	48 (BTM SLP B)	40	6D (R HUE OFF)	37
1E (V SUB)	B0	49 (KEIKO R)	80	6E (R HUE KEI)	1E
1F (NEGA IRIS)	75	4A (KEIKO B)	30	6F (DELAY TM)	10
20 (AGC)	FF	4B (TOP UP)	85	70 (FAST TM)	30
21 (NEGA Y- γ)	50	4C (TOP DOWN)	67	71 (CAM DDS 0)	00
22	00	4D (MDL UP)	70	72 (MODE)	09
23	00	4E (MDL DWN)	6B	73 (DSP MODE)	00
24 (MGC)	00	4F (BTM UP)	52	74 (CAM ALN)	00
25 (ADJ MODE)	00	50 (BTM DWN)	3C	75 (AWB MODE)	00

Table 7-6.

7-3-5. PG CONT and VSUB Adjustment

1. PG CONT adjustment (VC-85 board)

Subject	Not required
Measurement Point	Pin Ⓐ2 of check point array (PG CONT)
Measuring Equipment	Digital voltmeter
Adjustment Address	1D (PG CONT)
Specified Value	(Images voltage) ± 0.1 Vdc

Adjusting method:

1) Change the adjustment data of the adjustment address 1D by the adjustment remote controller and set PG CONT voltage to (imager voltage) ± 0.1 Vdc.
2) Change the adjustment address to store the last adjustment data in the memory.

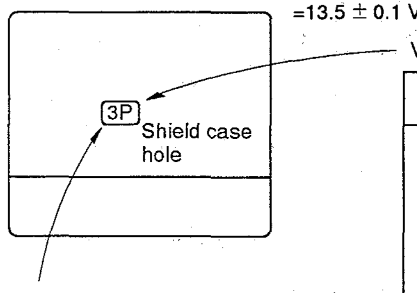
2. VSUB adjustment (VC-85 board)

Subject	Not required
Measurement Point	Pin Ⓑ4 of check point array (V SUB)
Measuring Equipment	Digital voltmeter
Adjustment Address	1E (V SUB)
Specified Value	(Imager voltage) ± 0.1 Vdc

Adjusting method:

1) Change the adjustment data of adjustment address 1E by the adjustment remote controller and set VSUB voltage to (imager voltage) ± 0.1 Vdc.
2) Change the adjustment address to store the last adjustment data in the memory.

CD-52 board shield case



Example:
If 3P is indicated;
PG CONT voltage specified value
=2.0 ± 0.1 Vdc
VSUB voltage specified value
=13.5 ± 0.1 Vdc

PG CONT voltage code

Code	Voltage (Vdc)
1	1.0
2	1.5
3	2.0
4	2.5
5	3.0
6	3.5
7	4.0

VSUB voltage code

Code	Voltage (Vdc)
E	9.0
F	9.5
G	10.0
H	10.5
J	11.0
K	11.5
L	12.0
M	12.5
N	13.0
P	13.5
Q	14.0
R	14.5
S	15.0
T	15.5
U	16.0
V	16.5
W	17.0
X	17.5
Y	18.0
Z	18.5

Fig. 7-11.

7-3-6. Hall Adjustment (VC-85 Board)

Subject	All black (Cover lens with black cap.)
Measurement Point	CN902
Measuring Equipment	AF microprocessor reading tool
Adjustment Element	RF851 (HALL GAIN)
Adjustment Address	1B (HALL OFFSET)
Specified Value	When iris closed: minimum value of 01 to 04 When iris opened: 3D or 3E

Adjusting method:

1) Set RV851 to the mechanical center.
2) Select the adjustment address 25 by the adjustment remote controller and set the adjustment data to 05. (Setting when iris closed)
3) Change the adjustment address to 1B.
4) Change the adjustment data so that the reading tool indication becomes the minimum value of 01 to 04. (Hall off set adjustment)
5) Change the adjustment address to 25 and set the adjustment data to 07. (Setting when iris open)
6) Adjust with RV851 so that the indication of the reading tool indication becomes 3D or 3E. (3D is displayed as 3 d .)
7) Repeat 2) to 6) until the specified values are met.
8) Select the adjustment address 25 and set the adjustment data to 00.
   (Adjustment mode is released.)
9) Change the adjustment address to store the adjustment in the memory.

7-3-7. Positive Iris Adjustment (VC-85 Board)

Subject	Color bar chart standard picture frame
Filter	ND filter 0.4 and 0.1
Measurement Point	Pin B11 of check point array (CCD OUT)
Measuring Equipment	Oscilloscope
Adjustment Address	19 (POSI IRIS)
Specified Value	300 ± 10 mV

Adjusting method:

1) Set the adjustment address to 19 with the adjustment remote controller.
2) Change the adjustment data by the adjustment remote controller with no ND filter attached, and set CCD OUT signal level to 300 ± 10 mV.
   (Change data from lower level to higher level and adjust it to the specified value.)
3) Attach the ND filter 0.5 (0.4+0.1) to the front of the lens and make sure that signal levels change smooth.
4) Remove the ND filter and make sure that signal level is 300 ± 20 mV.
5) If the specification is not met, repeat 2) to 4).
6) Change the adjustment address to store the adjustment in the memory.

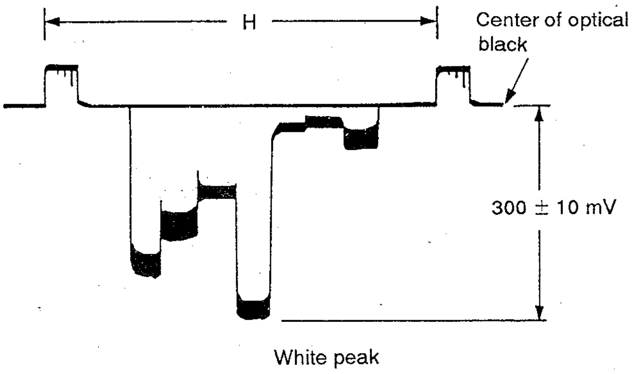


Fig. 7-12.

7-3-8. GC Confirmation (VC-85 board)

Subject	Color bar chart standard picture frame
Measurement Point	Pin B3 of check point array (Y (LPF) OUT)
Measuring Equipment	Oscilloscope
Adjustment Address	220 ± 20 mVp-p

Checking method:

1) Confirm that Y signal level is 220 ± 20 mVp-p.

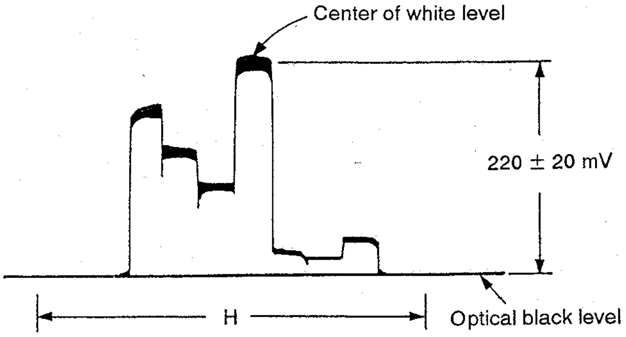


Fig. 7-13.

7-3-9. Y Signal Matrix Adjustment (VC-85 Board)

Subject	Color bar standard picture frame
Measurement Point	1: Pin A4 (Y0) of check point array 2: Pin A5 (Y1) of check point array
Measuring Equipment	Oscilloscope
Adjustment Address	OF (Y1 GAIN)
Specified Value	Y1 signal level=Y0 signal level

Note: Connect the probe to the measurement point via 10 KΩ resistor.

Adjusting method:

1) Connect the oscilloscope to Pin A4 of check point array and measure YO signal level.
2) Connect the oscilloscope to Pin A5 of check point array.
3) Set the adjustment address to 0F by the adjustment remote controller.
4) Change the adjustment data and match Y1 signal level with Y0 signal level measured in 1).
5) Change the adjustment address to store the adjustment data in the memory.

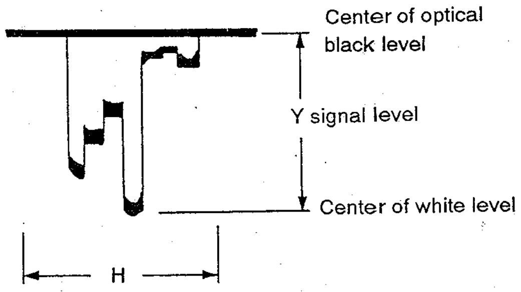


Fig. 7-14.

7-3-10. Chroma Signal Matrix Adjustment (1) (VC-85 Board)

Subject	Color bar standard picture frame
Measurement Point	1: Pin (A6) (C0) of check point array 2: Pin (A7) (C1) of check point array
Measuring Equipment	Oscilloscope
Adjustment Address	0E (C1 GAIN)
Specified Value	C1 signal level=C0 signal level

Adjusting method:

1) Connect the oscilloscope to Pin (A6) of check point array and measure C0 signal level. (The larger level of CR or CB should be C0 signal level.)
2) Signal connect the oscilloscope to Pin (A7) of check point array.
3) Set the adjustment address to 0E by the adjustment remote controller.
4) Change the adjustment data and match C1 signal level with C0 signal level measured in 1).
5) Change the adjustment address to store the adjustment data in the memory.

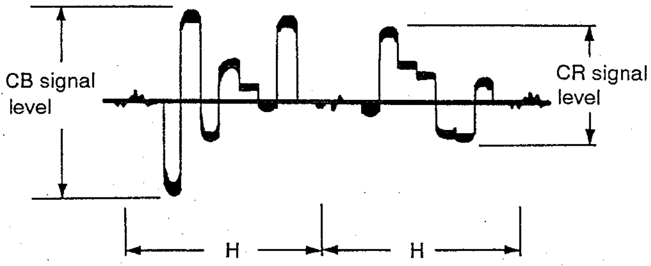


Fig. 7-15. C0, C1 signal level

7-3-11. Chroma Signal Matrix Adjustment (2) (VC-85 Board)

Subject	Color bar standard picture frame
Measurement Point	CH1 (X): Q712 emitter (B–Y) CH2 (Y): Connecting point (R–Y) between R765 and R822
Measuring Equipment	Oscilloscope (X–Y mode)
Adjustment Address	04 (C2 GAIN)
Specified Value	Separate luminance points should become one.

Note: Adjustment can be done in the same manner as using vectorscope.
(Vectorscope connecting terminal:video output terminal)

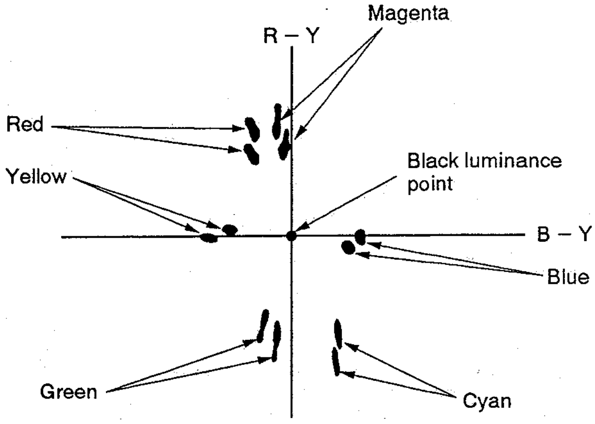

R – Y
Magenta
Red
Yellow
Black luminance point
B – Y
Blue
Green
Cyan

Fig. 7-17.

Measurement point

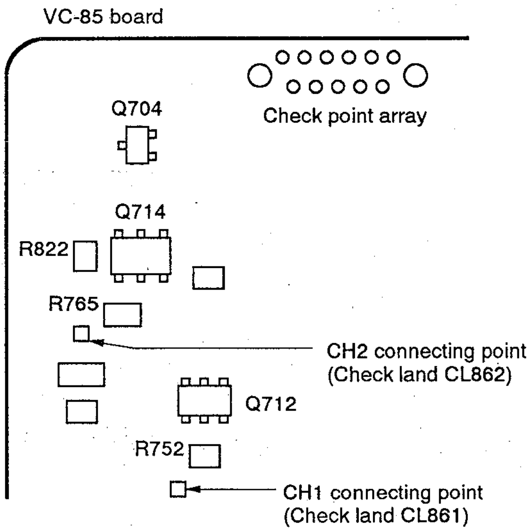

VC-85 board
Check point array
Q704
Q714
R822
R765
CH2 connecting point
(Check land CL862)
Q712
R752
CH1 connecting point
(Check land CL861)

Fig. 7-16.

Adjusting method:

1) Set the adjustment address to 04 by the adjustment remote controller.
2) Change the adjustment data so that two separate color luminance points become one respectively.
3) Change the adjustment address to store the adjustment data in the memory.

7-3-12. YH Level Adjustment (VC-85 Board)

Subject	Color bar chart standard picture frame
Measurement Point	Pin Ⓐ⑨ (YH) of check point array
Measuring Equipment	Oscilloscope
Adjustment Address	13 (YH GAIN)
Specified Value	1000 ± 40 mVp-p

Adjusting method:

1) Set the adjustment address to 13 by the adjustment remote controller.
2) Change the adjustment data by the adjustment remote controller and set YH signal level to 1000 ± 40 mVp-p.
3) Change the adjustment address to store the adjustment data in the memory.

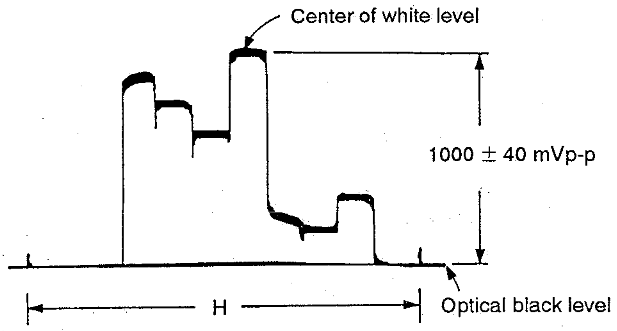


Fig. 7-18.

7-3-13. Sync Level Adjustment (PJ-43 Board)

Subject	All black (Attach the black cap to the lens.)
Measurement Point	J002 (video output) or Pin ⑤ (VIDEO OUT) of CN208 on VC-85 board
Measuring Equipment	Oscilloscope
Adjustment Address	12 (sync level)
Specified Value	285 ± 5 mVp-p

Note: Terminate J002 at 75Ω .

Adjusting method:

1) Set the adjustment address to 12 by the adjustment remote controller.
2) Change the adjustment data by the adjustment remote controller and set sync level to 285 ± 5 mVp-p.
3) Change the adjustment address to store the adjustment data in the memory.

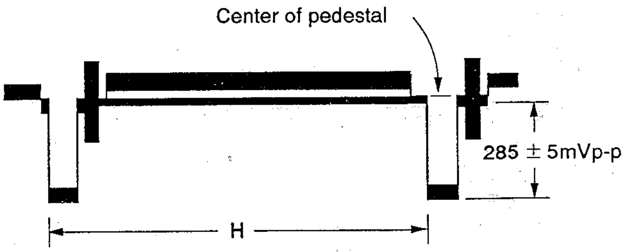


Fig. 7-19.

7-3-14. Setup Adjustment (PJ-43 Board)

Subject	All black (Attach the black cap to the lens.)
Measurement Point	J002 (video output) or Pin ⑤ (VIDEO OUT) of CN208 on VC-85 board
Measuring Equipment	Oscilloscope
Adjustment Address	11 (SET UP)
Specified Value	50 ± 10 mV

Note: Terminate J007 at 75Ω .

Adjusting method:

1) Turn "TINT" control (RV102 on VC-85 board) fully counterclockwise. (The procedure to reduce noises).
2) Set the adjustment address to 11 by the adjustment remote controller.
3) Change the adjustment data by the adjustment remote controller and set the set up level to 50 ± 10 mVp-p.
4) Change the adjustment address to store the adjustment data in the memory.
5) Return "TINT" control to the center click position.

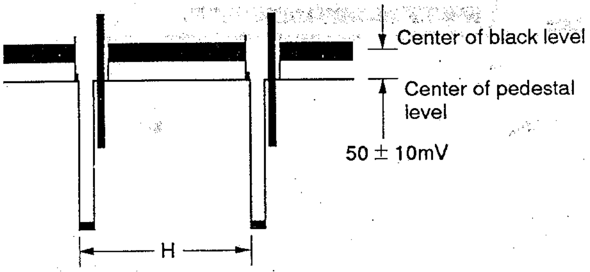


Fig. 7-20.

7-3-15. White Clip Adjustment (PJ-43 Board)

Subject	Color bar chart standard picture
Measurement Point	J002 (video output) or Pin ⑤ (VIDEO OUT) of CN208 on VC-85 board
Measuring Equipment	Oscilloscope
Adjustment Address	15 (POSI Y LEVEL)
Specified Value	840 ± 20 mV

Note: Terminate J007 at 75Ω .

Adjusting method:

1) Turn "TINT" control (RV102 on VC-85 board) fully counterclockwise.
2) Set the adjustment address to 15 and record the adjustment data.
3) Set the adjustment data to 40 by the adjustment remote controller.
4) Set the adjustment address to 10 by the adjustment remote controller.
5) Change the adjustment data by the adjustment remote controller and set the white clip level to 840 ± 20 mVp-p.
6) Set the adjustment address to 15 and enter the adjustment data recorded in 2).
7) Change the adjustment address to store the adjustment data in the memory.
8) Return "TINT" control to the center click position.

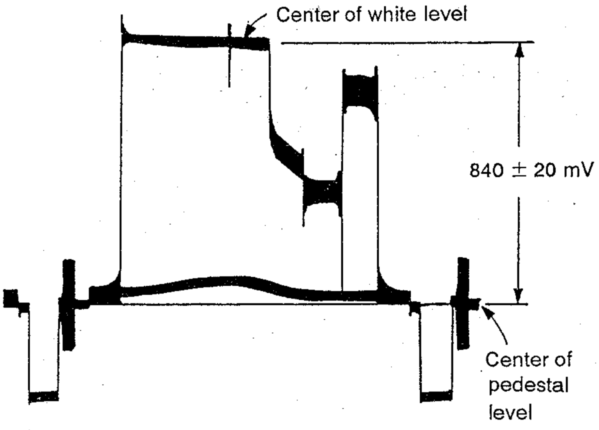


Fig. 7-21.

7-3-16. Y Level adjustment (PJ-43 Board)

Subject	Color bar chart standard picture
Measurement Point	J002 (video output) or Pin ⑤ (VIDEO OUT) of CN208 on VC-85 board
Measuring Equipment	Oscilloscope
Adjustment Address	15 (POSI Y LEVEL)
Specified Value	720 ± 10 mV

Note: Terminate J002 at 75Ω .

Adjusting method:

1) Set the adjustment address to 15 by the adjustment remote controller.
2) Change the adjustment data by the adjustment remote controller and set Y signal level to 720 ± 10 mV.
3) Change the adjustment address to store the adjustment data in the memory.

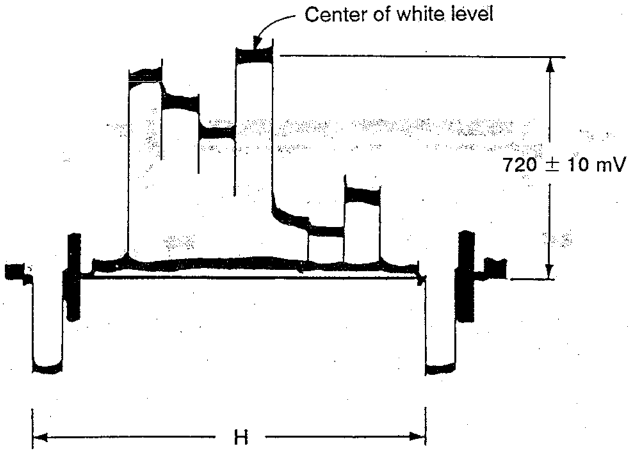


Fig. 7-22.

7-3-17. Aperture Adjustment (VC-85 Board)

Subject	Inmega cycle chart
Measurement Point	Pin Ⓐ8 (CAM Y) of check point array
Measuring Equipment	Oscilloscope
Adjustment Address	0A (C LEVEL)
Specified Value	420 ± 20 mV

Adjusting method:

1) Set the adjustment address to 14 by the adjustment remote controller.
2) Match the focus so that amplitude near 3 MHz becomes maximum.
3) Change the adjustment data so that the difference between 0.5 MHz level (peak not included) and 3 MHz peak level become 70 ± 10 mV.
4) Change the adjustment address to store the adjustment data in the memory.

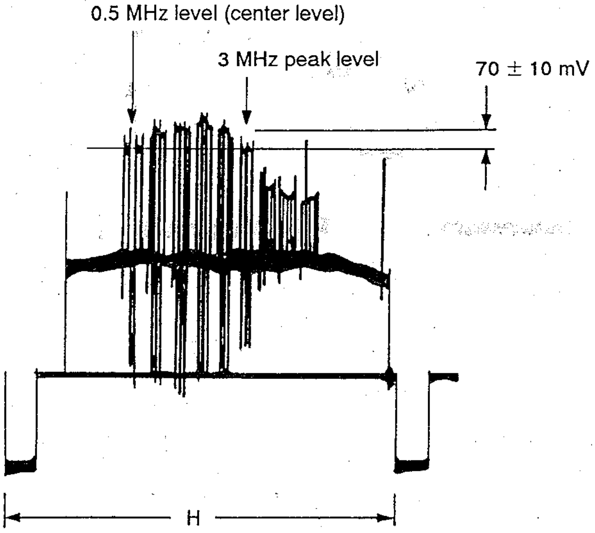


Fig. 7-23.

7-3-18. Chroma Level Adjustment (VC-85 Board)

Subject	Color bar chart standard frame
Measurement Point	Pin (A1) (G OUT) of check point array
Measuring Equipment	Oscilloscope
Adjustment Address	0A (C LEVEL)
Specified Value	420 ± 20 mV

Connection:

1) Connect with a jumper wire between Pin (B7) (MODE) of check point array and GND.

Adjusting method:

1) Set the adjustment address to 0A by the adjustment remote controller.
2) Change the adjustment data with the adjustment remote controller and set G OUT signal level to 420 ± 20 mV.
3) Change the adjustment address to store the adjustment data in the memory.

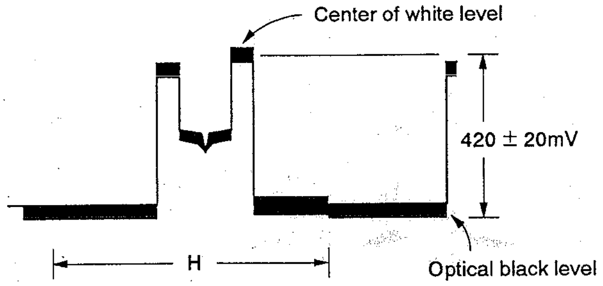


Fig. 7-24.

7-3-19. Burst Level Adjustment

Subject	All black (Attach the black cap to the lens.)
Measurement Point	CNJ002 (video output) or Pin ⑤ (VIDEO OUT) of CN208 on VC-85 board
Measuring Equipment	Oscilloscope
Adjustment Address	16 (BURST LEVEL)
Specified Value	285 ± 5 mVp-p

Note: Terminate J002 at 75Ω .

Adjusting method:

1) Set the adjustment address to 16 by the adjustment remote controller.
2) Change the adjustment data by the adjustment remote controller and set the burst level to 285 ± 5 Vmp-p.
3) Change the adjustment address to store the adjustment data in the memory.

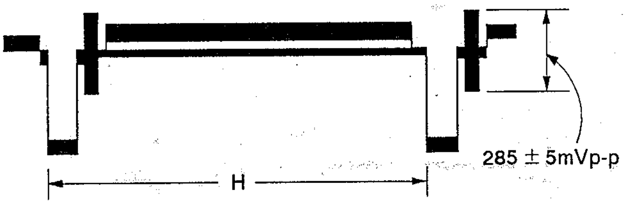


Fig. 7-25.

7-3-20. Negative Iris Adjustment (VC-85 Board)

Subject	Negative color bar chart standard picture frame
Measurement Point	Pin B11 (CCD OUT) of check point array
Measuring Equipment	Oscilloscope
Adjustment Address	1F (NEGA IRIS)
Specified Value	300 ± 10 mV

Switch setting
Negative/positive selection··············negative

Adjusting method:
1) Set the adjustment address to 1F by the adjustment remote controller.
2) Change the adjustment data by the adjustment remote controller and set CCD OUT signal level to 300 ± 10 mV. (Change the data from small to large level to meet the specification.)
3) Change the adjustment address to store the adjustment data in the memory.

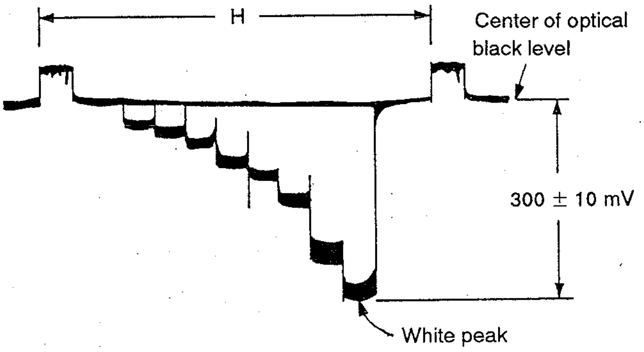


Fig. 7-26.

7-3-21. Negative Y Level Adjustment (PJ-43 Board)

Subject	Negative color bar standard picture frame
Measurement Point	J002 (video output) or Pin ⑤ (VIDEO OUT) of CN208 on VC-85 board
Measuring Equipment	Oscilloscope
Adjustment Address	18 (NEGA Y LEVEL) 0D (NEGA PED)
Specified Value	White level: 640 ± 10 mV Black level: 50 ± 10 mV

Note: Terminate J002 at 75Ω .

Switch setting:
Negative/positive selection··············negative

Adjusting method:
1) Turn "COLOR" control (RV102 on VC-85 board) fully counterclockwise.
2) Set the adjustment address to 0D by the adjustment remote controller.
3) Change the adjustment data by the adjustment remote controller and set black level to 50 ± 10 mV.
4) Set the adjustment address to 18.
5) Change the adjustment address and set the white level to 640 ± 10 mV.
6) Repeat 2) to 5) until both specified values are met.
7) Change the adjustment address to store the adjustment data in the memory.
8) Return "COLOR" control to the center click position.

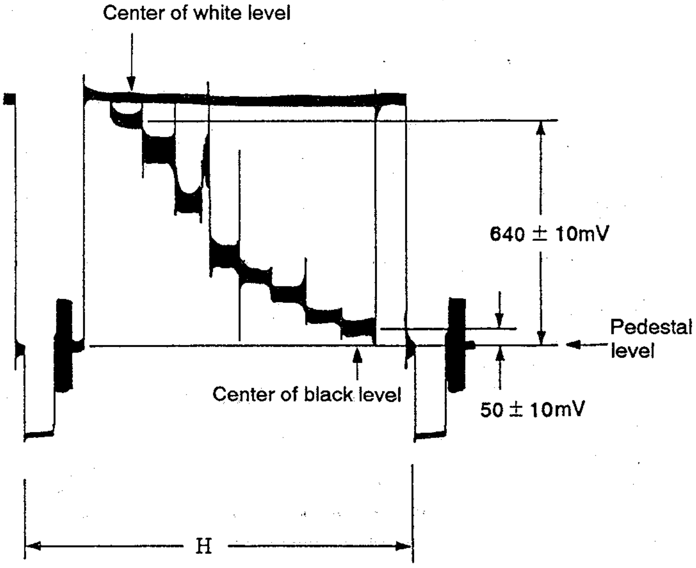


Fig. 7-27.

7-3-22. Negative Color Reproduction Adjustment (PJ-43 Board)

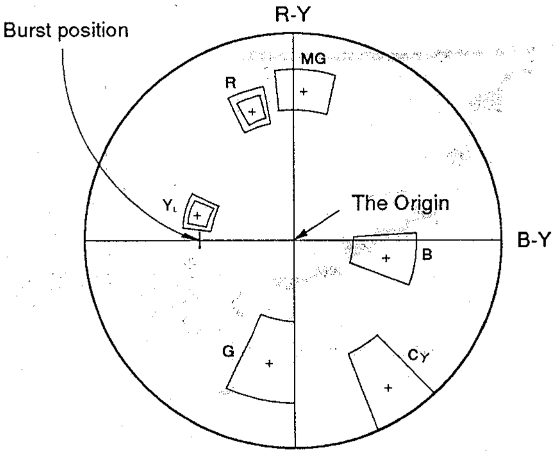
Subject	(Method Using Vectorscope) Negative color bar chart standard picture frame
Measurement Point	J002 (video output)
Measuring Equipment	Vectorscope
Adjustment Address	0B (NEGA R GAIN) 0C (NEGA B GAIN) 05 (NEGA R-Y GAIN) 06 (NEGA B-Y GAIN) 07 (NEGA R-Y HUE) 08 (NEGA B-Y HUE)
Specified Value	All color luminance points are within color reproduction frame.

Switch setting

Negative/positive selection··············negative

Adjusting method:

1) Confirm that the adjustment data of adjustment address 75 (AWB MODE) is 00.
2) Adjust the phase and gain of the vectorscope to set the burst luminance points to the designated position on the color reproduction frame (negative).
3) Change the data of adjustment address 0B and 0C by the adjustment remote controller, and match black luminance point with the origin.
4) Change each adjustment data of the adjustment address 05 to 08 and set all color luminance points within color reproduction frame.
5) Change the adjustment address to store the adjustment data in the memory.



Color reproduction frame for vectorscope (negative) for vectorscope

Fig. 7-28.

7-3-23. Negative Color Reproduction Adjustment (Method Using Oscilloscope)

1. GAIN adjustment (PJ-43 board)

Subject	Negative color bar chart standard picture
Measurement Point	J002 (video output) or Pin ⑤ (video out) of CN208 on VC-85 board
Measuring Equipment	Oscilloscope
Adjustment Address	0B(NEGA R GAIN) 0C(NEGA B GAIN) 05(NEGA R-Y GAIN) 06(NEGA B-Y GAIN)
Specified Value	1. Chroma signal level of "black" is minimum. 2. Chroma signal level of "red" is 533 ± 30 mVp-p. 3. Chroma signal level of "yellow" is 465 ± 23 mVp-p.

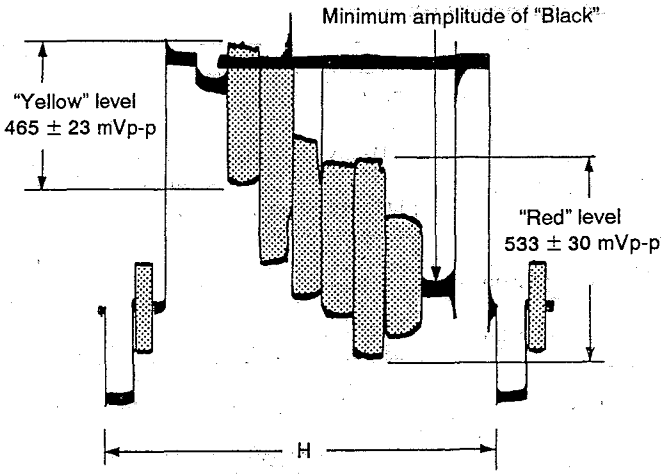


Fig. 7-29.

Note: Terminate J002 at 75Ω.

Switch setting
Negative/positive selection··············negative

Adjusting method:

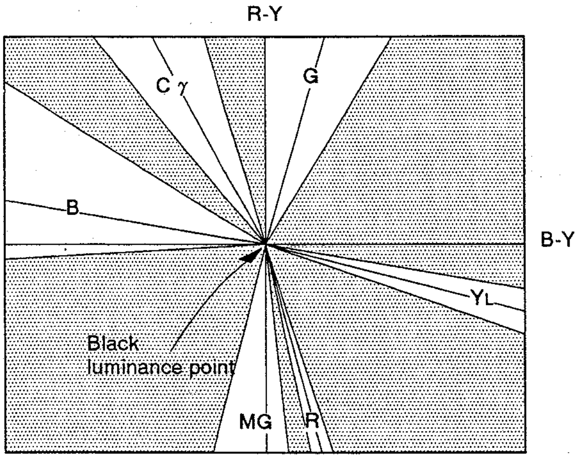
- White balance adjustment
  1) Confirm that the adjustment data of adjustment address 75 (AWB MODE) is 00.
  2) Change the data of adjustment address 0B and 0C by the adjustment remote controller and make chroma signal level of "Black" is minimum.
- Gain adjustment
  3) Set adjustment address to 06 by the adjustment remote controller and set adjustment data to "DB".
  4) Set adjustment address to 07 and set adjustment data to "C3".
  5) Set adjustment address to 08 and set adjustment data to "CB".
  6) Set adjustment address to 05 and change adjustment data so that chroma signal level of "red" becomes 533 ± 30 mVp-p.
  7) Set adjustment address to 06 and change adjustment data so that chroma signal level of "Yellow" becomes 465 ± 23 mVp-p.
  8) Repeat 5) to 6).
  9) Change the adjustment address to store the adjustment data in the memory.
  10) Perform "Hue adjustment".

2. Hue adjustment (VC-85 board)

Subject	Negative color bar chart standard picture frame
Measurement Point	CH1 (X): Q712 (B-Y) CH2 (Y): connecting point (R-Y) between R765 and R822 (See Fig. 7-16.)
Measuring Equipment	Oscilloscope (X-Y mode)
Adjustment Address	07 (NEGA R-Y HUE) 08 (NEGA B-Y HUE)
Specified Value	All color luminance points are within color reproduction frame.

Switch setting
Negative/positive selection··············negative

Adjusting method:
1) Move the black luminance point on the oscilloscope to the origin point of the color reproduction frame.
2) Change the adjustment data at adjustment addresses 07 and 08 with the adjustment remote controller to bring the various color luminance points into the color reproduction frame.
   Note: The luminance points are inverted up/down and right/left against positive color reproduction frame.
3) Check the hue reproduced on the monitor TV and fine adjust the adjustment data at adjustment addresses 07 and 08 if necessary.
4) Set the oscilloscope to normal mode and connect it to J002 (video output) on the PJ-43 board, then make sure that the specified value of " 1. Gain adjustment" is met. If not, change the data of the adjustment addresses 05 and 06.
5) Change the adjustment address to store the adjustment data in the memory.



Negative color reproduction frame for oscilloscope

Fig. 7-30.

7-3-24. Negative Pre-white Balance Adjustment (VC-85 Board)

Subject	Negative white balance chart (orange) standard picture frame
Measurement Point and Measuring Equipment	When vectorscope used: J002 on PJ-43 board (video output) or Pin ⑤ (VIDEO OUT) of CN208 When Oscilloscope (X-Y mode) used: CH1 (X): Q712 emitter (B-Y) CH2 (Y): connecting point (R-Y) between R765 and R822 (See Fig. 7-16)
Adjustment Address	0B (NEGA R GAIN) 0B (NEGA R GAIN)
Specified Value	When vectorscope used: The white luminance point should be within origin centered circle of ϕ 1 mm. When oscilloscope used. White luminance point and black luminance point should be matched.

Switch setting
Negative/positive selection··············negative

Adjusting method:
1) Make sure that the adjustment data of adjustment address 75 (AWB MODE) is 00.
2) Change the data of adjustment address 0B and 0C, and match white luminance point with the origin. (When the oscilloscope is used, match white luminance point with the origin. At this time, make sure that the white pattern has no color on the monitor TV.)
3) Change the adjustment address to store the adjustment data in the memory.

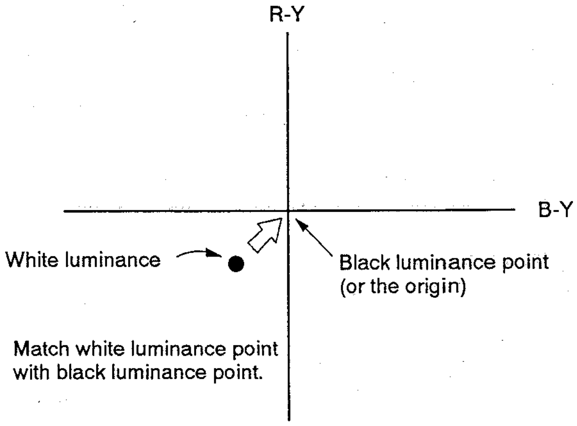

R-Y
B-Y
White luminance
Black luminance point (or the origin)
Match white luminance point with black luminance point.

Fig. 7-31.

7-3-25. Auto White Balance Adjustment

Note: Be sure to perform this adjustment after completing preset adjustment.

1. Preset adjustment (VC-85 board)

Subject	Negative white balance pattern (orange)

Note: 1) Perform preset adjustment after applying power for more than 30 sec.
2) Be sure to OFF/ON the power supply before performing preset adjustment again.

Switch setting
Negative/positive selection···············negative

Preparation:
Confirm that EVR ADJ mode is normal. (Pin (B6) is open.)

1) Prepare to connect with 1 kΩ resistor between Pin (B5) (AW ADJ) on the check point array and Pin ① of IC207 (REV 5V).

Adjusting method:

1) After OFF/ON the power, connect with the jumper wire between Pin (B6) (CAM ADJ) on the check point array and GND, then wait for more than 30 seconds.
2) Select the adjustment address 75 (AW ADJ) and set adjustment data to E0. (3200k preset data read mode)
3) Change the adjustment address to store the adjustment data in the memory. Wait five seconds or more.
4) Disconnect the jumper wire between Pin (B6) (CAM ADJ) of check point array and GND.
5) Connect with a 1 kΩ resistor between Pin (B5) (AWB ADJ) of check point array and Pin ① (REG 5V) of IC207.
6) Connect with the jumper wire between Pin (B6) (CAM ADJ) of check point array and GND.
7) Confirm that the display data (address 01) of the adjustment remote controller has changed.
8) Disconnect the jumper wire connected to Pin (B6) (CAM ADJ) of check point array after allowing one second or more to elapse.
9) Disconnect the 1 kΩ resistor connected to Pin (B5) (AWB ADJ) of check point array.
10) Connect with the jumper wire between Pin (B6) (CAM ADJ) of check point array and GND.
11) Perform the following “Auto White Balance Adjustment”.

2. Auto White Balance Adjustment (VC-85 board)

Subject	White balance chart (gray) standard picture frame
Measurement Point	When vectorscope used: J002 on PJ-43 board (video output) or Pin ⑤ (VIDEO OUT) of CN208 on VC-85 board When Oscilloscope (X-Y mode) used: CH1 (X):Q712 emitter (B-Y) CH2 (Y):connecting point (R-Y) between R765 and R822 (See Fig. 7-16)
Adjustment Address	01 (DELTA R) 02 (DELTA B)
Specified Value	When vectorscope used: White luminance point and the origin should be matched. When oscilloscope used: White luminance point and black luminance point should be matched.

Switch setting
Negative/positive selection··············negative

Adjusting method:

1) Connect with the jumper wire between Pin (B1) (WB ADJ) of check point array and GND.
2) Select the adjustment address 75 and set adjustment data to 10. (auto white balance adjustment mode)
3) Confirm that the white balance chart (gray) is attached.
4) Change the data of 01 and 02 of the adjustment address and match white luminance point with the origin. (When using oscilloscope, match with black luminance point.)
5) Select the adjustment address 75 and set adjustment data to F0. (auto white balance tracking zone invalid:all area discrimination mode)
6) Change the data of 01 and 02 of the adjustment address and match the white luminance point with the origin. (When using oscilloscope, match with black luminance point.)
7) Disconnect the jumper wire connected to Pin (B6) (CAM ADJ) of check point array and GND.
8) Disconnect the jumper wire connected to Pin (B1) of check point array and GND.
9) Connect with the jumper wire between Pin (B6) (CAM ADJ) of check point array and GND.
10) Set negative/positive selection switch to positive side.
11) Perform "Positive pre-white balance adjustment".

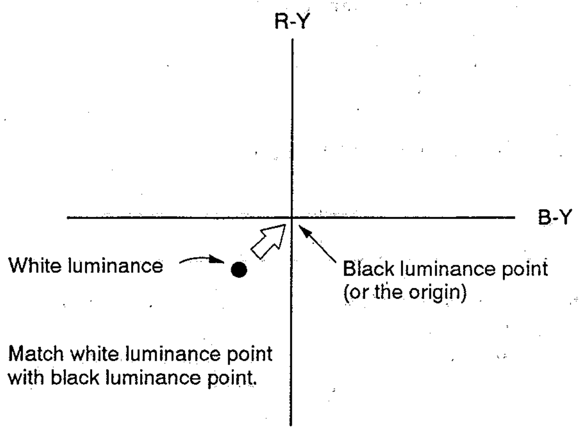


Fig. 7-32.

7-3-26. Positive Pre-white Balance Adjustment (VC-85 Board)

Subject	White balance chart (gray) standard picture frame
Measurement Point	When vectorscope used. J002 (video output) on PJ-43 board or Pin ⑤ (VIDEO OUT) of CN208 on VC-85 board When oscilloscope used: CH1 (X):Q712 emitter (B-Y) CH2 (Y):connecting point (R-Y) between R765 and R822 (See Fig. 7-16.)
Adjustment Address	1A (POSI R GAIN) 1C (POSI B GAIN)
Specified Value	When vectorscope used. The white luminance point is within the origin centered circle of ϕ 1 mm. When oscilloscope used. White luminance point and black luminance point should be matched.

Adjusting method:

1) Confirm that negative/positive selection switch is set to positive side.
2) Set the adjustment address to 75 (AWB MODE) and confirm that adjustment data is F0.
3) Set the adjustment address to 01.
4) Set the adjustment address to 02.
5) Set the adjustment address to 1A.
6) Change the data of 1A and 1C of the adjustment address and match white luminance point with the origin. (When using oscilloscope, match with black luminance point.)
7) Change the adjustment address to store the adjustment data in the memory.

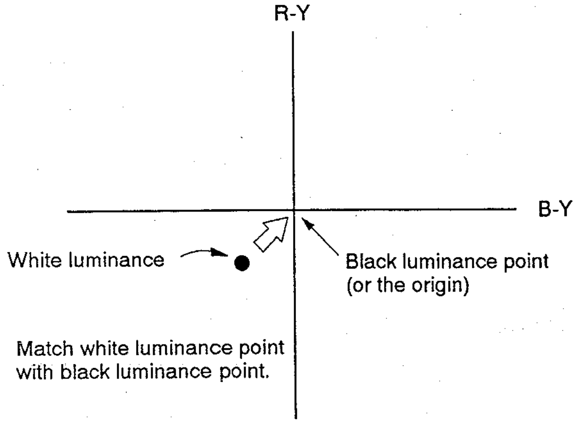


Fig. 7-33.

7-3-29. Auto Focus Adjustment (VC-85 board)

1. Adjustment in all black pattern

Subject	All black (Attach a black cap to the lens.)
Measurement Point	CN902
Measuring Instrument	Reading tool for AF microprocessor data
Adjustment Address	31 (FHB), 33 (AGC B)

Adjusting method:

1) Set the adjustment address 25 by the adjustment remote controller and set adjustment data to FF.
   (Set the auto focus filter to FH side.)
2) Read the display data (FH B) of AF microprocessor data reading tool and enter adjustment address 31. (FH B should be 00 to 05.)
3) Set the adjustment address 25 by the adjustment remote controller and set adjustment data to FD.
   (Set the auto focus filter to FA side.)
4) Confirm the displayed data (FA B) of AF microprocessor data reading tool is 00 to 08.)
5) Set the adjustment address 25 and enter adjustment data 0B. (AGC A/D value display mode).
6) Read the display data (AGC B) of AF microprocessor data reading tool and enter adjustment address 33.
7) Perform "Adjustment in white pattern".

2. Adjustment in white pattern

Subject	White pattern fully TELE end Note 1
Measurement Point	CN902
Measuring Instrument	AF micro processor reading tool
Adjustment Address	30 (FWH), 32 (AGC W)

Note: Remove the chart and shoot the white diffusing surface of light source in fully TELE end. At this time, check that no dust or stain is attached on the white diffusing surface.

Adjusting method:

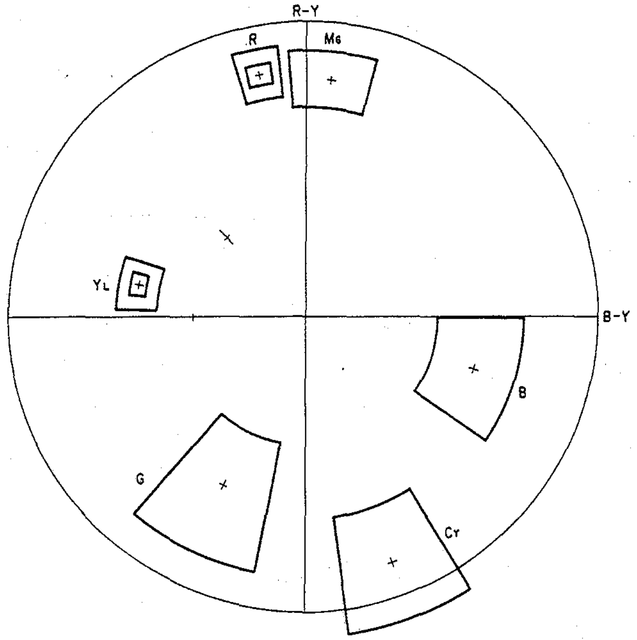
1) Set the adjustment address 25 by the adjustment remote controller and enter adjustment data FF.
2) Read the displayed data (FH W) of AF microprocessor data reading tool and enter adjustment address 30. (FH W should be 00 to 04.)
3) Set the adjustment address 25 by the adjustment remote controller and enter adjustment data FD.
4) Confirm that the displayed data (FA W) of AF microprocessor data reading tool is 00 to 06.)
5) Set the adjustment address 25 and enter adjustment data is 0B.
6) Read the displayed data (AGC W) of AF microprocessor data reading tool and enter adjustment address 32.
7) Set the adjustment address 25 and enter adjustment data 00.
8) Change the adjustment address to store the adjustment data in the memory.

7-3-30. Auto Focus Confirmation (VC-85 Board)

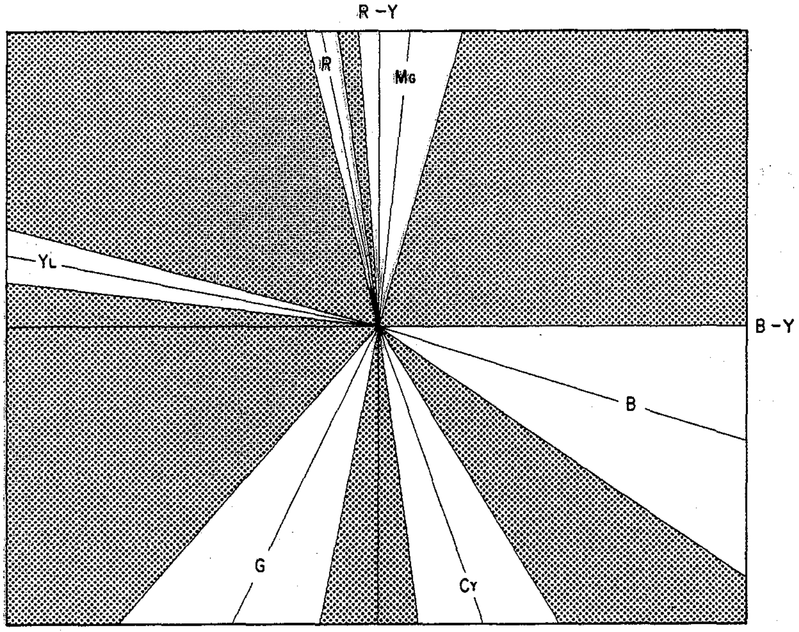
Subject	Siemens star
Filter	ND filter 1.0 and 0.1 (2 pcs)
Measurement Point	CN902
Measuring Instrument	AF microprocessor reading tool

Adjusting method:

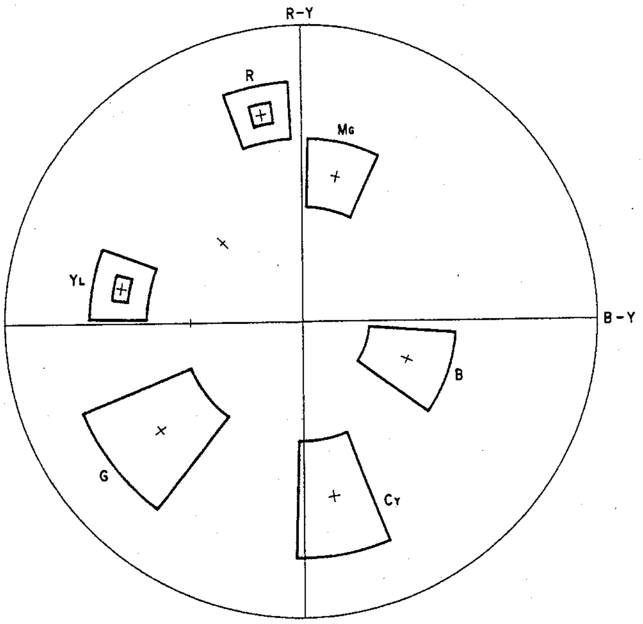
1) Mount the ND filter 1.2 (1.0+0.1+0.1) on the lens.
2) Press the zoom T button to set the zoom TELE end.
3) Adjust the chart position so that the center of siemens star matches with that of the monitor TV screen.
4) Press the focus N button to set the focus near end.
5) Keep pressing "AUTO" button for three seconds and hand off the button after confirming a sharp image.
6) Set the adjustment address 25 by the adjustment remote controller and enter adjustment data FF.
7) Confirm that the displayed data (FH SM) of AF microprocessor data reading tool is 0F to 37.
8) Set the adjustment address 25 and enter adjustment data FD.
9) Confirm that the display data (FA SM) of AF microprocessor data reading tool is 4E to 80.
10) Set the adjustment address 25 and enter adjustment data 00.
11) Change the adjustment address to store the adjustment data in the memory.


R-Y
R
MG
YL
B-Y
B
G
CY

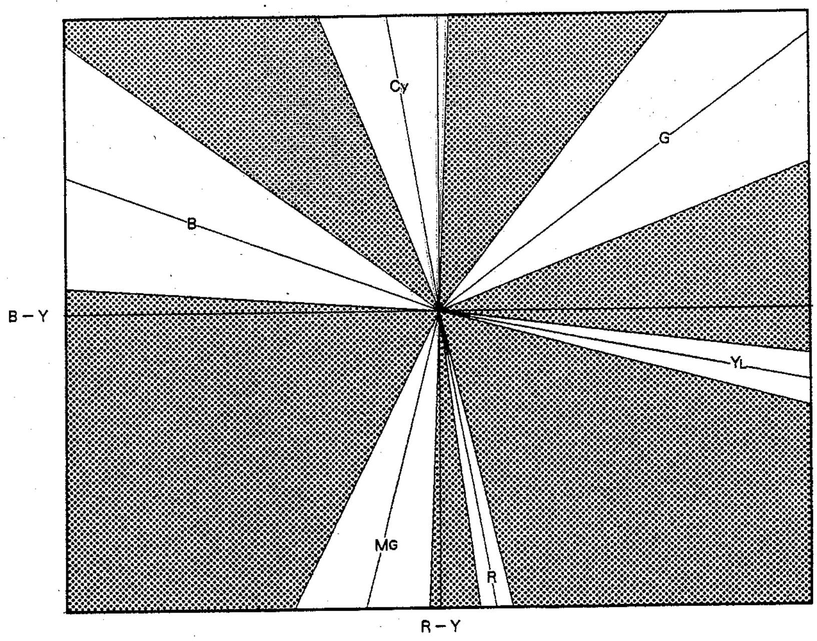
Color Reproducibility Adjustment (For Positive)
For Vectorscope


R -Y
R
MG
YL
B -Y
B
G
CY

Color Reproducibility Adjustment (For Positive)
For Oscilloscope


R-Y
R
MG
YL
B-Y
B
G
CY

Color Reproducibility Adjustment (For Negative)
For Vectorscope


CY
G
B
B-Y
YL
MG
R
R-Y

Color Reproducibility Adjustment (For Negative)
For Oscilloscope